STATUTORY ENQUIRY—1926

STEEL INDUSTRY

VOLUME V

The Written and Oral Evidence given by the Railway Board and the Railways before the Indian Tariff Board.

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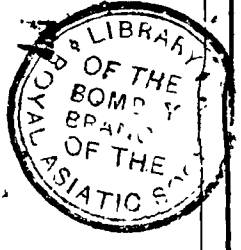

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RAILWAY BOARD.

A.—WRITTEN.

I.—Questionnaire issued by the Tariff Board to the Railway Board and Railways.

Rails and fishplates.

1. Please state the quantities and the price per ton of—

(*a*) British,

(*b*) Continental, and

(*c*) Indian rails and fishplates

purchased by ~~your railway~~ the Railway Board for each year from 1921-22 to 1925-26. In the case of Continental rails and fishplates, please distinguish the country of origin.

N.B.—1. For rails and fishplates purchased in India, please distinguish between those purchased under contract with the Tata Iron and Steel Company and others.

2. For British and Continental rails and fishplates, kindly state where possible the sterling f.o.b. prices and the charges for freight, landing, etc., separately. If this is not possible, kindly state the c.i.f. price in sterling.

2. What do you estimate as the probable consumption by your railway the Railway Board of rails and fishplates to be debited to—

(*a*) Capital,

(*b*) Revenue

account during the next five years?

3. Have you entered into any contracts for the supply of rails and fishplates from 1926-27 onwards? If so, please give full particulars of such contracts stating especially their duration, the quantities contracted for, the price fixed under the contract and the country of origin.

4. (*a*) If you have purchased or propose to purchase Continental rails and fishplates, kindly state fully the considerations which have influenced you in doing so.

(*b*) What specifications, if any, are prescribed for the Continental rails and fishplates which you purchase? Are any arrangements made for the inspection of such rails and fishplates during manufacture? What arrangements are made for the testing of rails and fishplates in the country of origin and in India?

5. What has been your experience in regard to the quality of rails and fishplates manufactured in Great Britain, on the Continent and in India respectively?

6. To what extent would the annual capital or revenue expenditure of your railway be increased by every increase of Rs. 5 in the present duty of Rs. 14 per ton on rails and fishplates, assuming that the price was increased to the full extent of the duty?

7. On the assumption that the Steel industry establishes a case for the continuance of protection and that the payment of bounties will not enable the industry to secure the prices for rails contemplated by the scheme of protection, have you any views as to the form in which protection should be given?

II.—Replies to questionnaires regarding rails and fishplates.

(1) *Letter from the Railway Board, dated the 8th June 1926.*

In continuation of this office telegram No. 3435-S., dated 21st May 1926, I am directed to reply to questions 3, 4, 5 and 7 of the questionnaire sent with your letter No. 210, dated 7th May 1926, as follows:—

3. There is a pre-existing contract with Messrs. the Tata Iron and Steel Company for the supply of rails and fishplates to State-worked railways during the year 1926-27. The contract came into force from 1st April 1920 and will terminate on the 31st of March 1927. The total quantity of rails and fishplates which the company was to supply during the period of the contract was 300,000 tons, and the prices fixed per ton f.o.r. Tatanagar for requirements during 1926-27 are as follows:—

	Per ton.
For rails 50 lbs. section and upwards	130
For rails 40 lbs. section up to 49 lbs.	140
For rails below 40 lbs. section	155

The price per ton of fishplates in all cases to be the price per ton for the rail section to which they belong increased by Rs. 30.

4. (*a*) No continental rails or fishplates have been purchased by the Railway Board on behalf of the State-worked railways.

(*b*) The specifications laid down for rails and fishplates for State-worked railways are the same whatever the source of supply. A copy of each one of these specifications* is enclosed herewith. For arrangements made for inspection and testing of rails and fishplates, attention is invited to paragraphs 8, 14, and 15 of the specification for rails and paragraphs 9 and 12 of the specification for fishplates.

No further test of either rails or fishplates is carried out after receipt in India.

5. The quality of rails ordered for the State-worked railways has been generally satisfactory, but Tata's rails have not been in use for a sufficiently long time for a definite opinion to be recorded about their wearing qualities as compared with foreign rails.

7. The Railway Board feel some difficulty in answering this hypothetical question, more especially as they are not aware of the conditions in which it is suggested that a bounty system might fail to enable the steel industry to secure the prices for rails contemplated by the scheme of protection. All they can say is that they would be averse to any scheme which by raising the charges to railways, would re-act adversely on the cost of transportation.

(2) *Letter from the Railway Board, dated 25th September 1926.*

In continuation of my letter No. 3435-S., dated the 7th of August 1926, I am directed to say that in the opinion of the Railway Board it would not be unreasonable for the Tariff Board to assume for their purposes that about 200,000 tons of rails will be required by railways in India annually during the next five years. In expressing this opinion the Railway Board wish to make it perfectly clear that they are giving no guarantee whatsoever that rails in this quantity will be purchased annually during the quinquennium; the estimate has merely been made in order to assist the Tariff Board in their enquiry, and is necessarily based on programmes which are at present purely provisional and have not received the Railway Board's concurrence.

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* Not printed.

(3) *Letter from the Tariff Board, to the Railway Board, No. 317, dated the 2nd June 1926.*

In continuation of the Tariff Board's letter No. 210, dated the 7th May 1926, I am directed to state that in considering the question whether a specific or an *ad valorem* duty should be substituted for the bounties at present paid on the manufacture of rails and fishplates, the Tariff Board will have to examine the effect of such a duty on (*a*) the State Railways, (*b*) Company Railways and (*c*) on the contribution received by General from Railway Revenues, under the scheme of the separation of Railway from General finances. It will also be necessary for the Tariff Board to consider the effect of the discontinuance of bounties and the levy of a duty on the Revenues of the State as a whole. The Board would be glad if it could be supplied with a statement which will assist it in understanding the position from this point of view with reference to 1926-27 or if figures for this year are not available then for 1925-26. For the purposes of calculation the following assumptions may be made:—

(1) That the amount of duty is as proposed by the Tata Iron and Steel Company, *i.e.*, Rs. 40 per ton, and is in addition to the existing specific duty of Rs. 14 per ton.

(2) That the price of all rails and fishplates, whether manufactured locally or imported, will increase to the full extent of the duty.

2. The Board would be grateful if this information could kindly be supplied by about the 18th instant.

---

(4) *Letter No. 84358, dated the 26th June 1926, from the Railway Board, to the Tariff Board, Calcutta.*

In reply to your letter No. 317, dated the 2nd June 1926, I am directed to say that, on such figures as are at present available, it seems likely that railways in India have placed or will wish to place orders for about 194,000 tons of rails and 6,000 tons of fishplates in 1926-27. With a rise of Rs. 40 a ton in price, these rails and fishplates would cost them about 80 lakhs more, of which about 57 lakhs would probably be debitable to capital and about 23 lakhs to the depreciation fund. A table is attached showing the probable distribution of these figures between State-managed and Company-managed railways.

2. On such estimates as the Railway Board are in a position to make, a rise of Rs. 40 per ton in the cost of the rails and fishplates likely to be ordered *in the current year only* would mean a permanent annual loss to railway revenues of Rs. 4,61,000 and to general revenues (apart from any increased customs receipts) of Rs. 58,000 with a small permanent annual reduction of Rs. 7,000 in companies' shares of surplus profits. In the initial year companies' shares of surplus profits would however be reduced by a sum of about Rs. 2,30,000 of which Rs. 1,84,000 would accrue to railway revenues, and Rs. 46,000 to general revenues.

	Rails.	Fishplates.	Additional Cost.	
			Capital.	Depreciation Fund.
	Tons.	Tons.	Rs. lakhs.	Rs. lakhs.
State-managed railways . .	88,000	4,500	37·00	...
Company-managed railways .	106,000	1,500	20·	23*
Total .	194,000	6,000	57·	23·

*For the purpose of determining Companies' shares of surplus profits this figure would be a direct charge against working expenses.

(5) *Statement supplied by the Railway Board showing the orders placed by principal Railways in India for rails and fishplates required during the year 1926-27.*

Railways.	With Tatas.		Abroad.		Remarks.
	Rails.	Fishplates	Rails.	Fishplates.	
	Tons.	Tons.	Tons.	Tons.	
N. W.	56,772	2,513	...	278	Orders placed with Tatas for additional 1,414 tons rails and 72 tons of fishplates.
E. B.	4,998	249	...	...	
G. I. P. . . .	7,756	242	...	...	
E. I.	9,799	324	...	...	
C. I. C. . . .	7,353	322	...	...	
N. G. S. . . .	11,445	326	...	...	
M. & S. M. . . .	2,212*	...	13,404	With necessary fishplates say about 670 tons.	* Figures taken from provisional programme prepared by Tatas. Include some requirements of 1927-28.
B. & N. W. . . .	4,800	180	...	...	
B., B. & C. I. Railways	25,280*	791	...	...	
Assam and Trading Company.	1,500*	not known	...	...	
J. Railway . . .	...	...	4,376	No information available.	
Burma	...	...	16,000		
S. I.	...	...	26,697		
A. B.	*nil*	*nil*	*nil*	*nil*	
B. N.	Not	ordered	yet	...	
Total .	1,31,915	4,947	60,477	948	
	1,36,862 tons.		61,425 tons.		
	1,486 see remarks.				
	1,38,348				

In addition to the orders placed by Railways with Tatas for supply during 1926-27, there were arrears to the extent of about 7,820 tons to be supplied to Railways against 1925-26 demands. During the year 1926-27, to fulfil their obligations to Railways, Tatas must roll 141, 682, 1,486 and 146, 168 tons of rails and fishplates. Tatas estimated their output of rails and fishplates during the year 1926-27 to be 150,000 tons.

(6) *Letter from the Railway Board, No. 3358-S., dated the 18th November 1926.*

With reference to the evidence tendered by the Railway Board on the 26th of July last, in connection with the enquiry regarding the protection of rails

and fishplates manufactured in India, I am directed to forward herewith a copy of a letter No. 11474-K.-316, dated 25th October, 1926, from the Agent, Great Indian Peninsula Railway, relating to the wearing qualities of English and Indian rails. The information was promised to the Tariff Board by Sir Clement Hindley in reply to a question by Mr. Mather.

Copy of letter No. 11474-K.-316, dated 25th October 1926, from the Agent, Great Indian Peninsula Railway, to the Secretary, Railway Board.

COMPARISON BETWEEN TATAS AND BRITISH RAILS.

In the Railway Board's letter No. 3353-S., dated 17th August, 1926, we were asked to report on the present condition of the Tata's and British rails which were laid side by side on this Railway between the years 1916 and 1917 and on which a report was previously submitted in 1920.

2. In my telegram No. 11474-K. of 1st October, 1926, the Railway Board were informed that we were unable on that date to report on these rails.

3. I now beg to advise you that a comparison by weighment between the Tata and British rails referred to above was made in May 1925 and the results showed no appreciable difference in wear between the British and Indian rails.

III.—Questionnaire issued by the Tariff Board to the Railway Board and Railways.

Steel materials other than rails and fishplates.

1. The various classes of steel and wrought iron materials other than rails and fishplates on which protective duties are at present imposed are as follows:—

Rolled steel (including beams, angles, channels, plates, bars and rods, sheets black and galvanized).

Wire and Wire-nails.

Tinplates.

Fabricated steel.

Kindly state, as far as possible, the quantities and prices of each of these classes of material purchased by your railway for each year from 1921-22 to 1925-26 distinguishing the country of origin. For purchases made in Great Britain and on the Continent, kindly state, as far as possible the sterling f.o.b. price and the charges for freight, landing, etc., separately. If this is not possible, kindly state the c.i.f. price in sterling.

2. To what extent has the annual capital or revenue expenditure of your railway been increased by the imposition of the protective duties? Has the imposition of the duties affected your purchases of the various classes of material? To what extent is their maintenance at the present level likely to affect your future purchases?

3. What do you estimate as the probable consumption of the various classes of material by your railway during the next five years?

4. Have you entered into any contract for the supply of any of these classes of material from 1926-27 onwards? If so, please give full particulars of such contracts stating especially their duration, the quantities contracted for, the prices fixed under the contract and the country of origin?

5. If you have purchased or propose to purchase any of the materials mentioned above on the Continent, kindly state fully the considerations which have influenced you in doing so.

6. What has been your experience in regard to the quality of any or all of these materials manufactured in Great Britain, the Continent and India respectively?

IV.—Replies to questionnaires regarding other Steel.

Telegram from the Railway Board, dated 21st May 1926.

3434-S. Your letter 217 of 8th May Questionnaire regarding purchase steel materials other than rails and fishplates. Question four no contract has been entered into. Suggest to avoid delay information relating to other questions be obtained direct from Agents of State-worked railways.

V.—Questionnaires issued by the Tariff Board to the Railway Board and the Railways.

Steel castings for locomotives, railway carriages and wagons.

1. Please give a list of the principal steel castings required for locomotives, carriages and wagons respectively. Does the following list of castings which the Hukumchand Electric Steel Works Company claim to be in a position to be able to manufacture out of scrap steel include all these classes?

(*a*) *Locomotive.*—Axle Boxes, Buffers, Bogie Frame Stays, Motion Plates, Distance pieces, Piston Valve Heads, Wheel centres, Horn blocks, etc.

(*b*) *Carriage and Wagon.*—Axle Boxes, Buffers, Bogie Centre Brackets, Queen Posts, Top Bolster Spring Bearings, Bottom Side Bearers, Sleeve Washers, Spring Sleeves, Spring Caps, Top and Bottom Side Bearers.

2. Have any of these classes of castings been standardized so as to permit of their use in more than one type of locomotive, carriage or wagon?

3. In your opinion is there any inherent difficulty involved in the process of manufacture or in obtaining raw material which would prevent the economic production in India of these classes of castings?

4. Kindly state the total weight of the principal classes of steel castings used by your railway each year from 1921-22 onwards under the following heads:—

(*a*) Imported as such.

(*b*) Manufactured in India elsewhere than in your workshops.

(*c*) Manufactured in your workshops.

5. Please state the price per cwt. paid for each of the principal classes of steel castings falling under headings (*a*) and (*b*) in question 4 for each year from 1921-22 onwards.

N.B.—1. For castings imported from the Continent, please distinguish the country of origin.

2. For both British and Continental castings please state where possible the sterling f.o.b. prices and the charges for freight, landing, etc., separately. If this is not possible, please state the c.i.f. price in sterling.

6. What arrangements are made for testing castings imported from the Continent—

(*a*) in the country of origin,

(*b*) in India?

7. In the case of castings manufactured in your own workshops, please state the raw materials from which they were manufactured and give the average works cost per cwt. of finished production under the following headings:—

	Quantity.	Value.
(1) Materials, *e.g.*, scrap, refractories, fluxes, stores, etc.		
(2) Cost above materials, *e.g.*—		
Power		
Fuel		
Repairs		
General Works Supervision . . .		
Miscellaneous		

8. What is the percentage of rejected castings in your own workshops?

9. If you manufacture axle boxes in your workshops, please give separately for these the particulars specified in question 7.

10. If you have any experience of steel castings manufactured in India (elsewhere than in your own workshops), please state the names of the makers and give your views in regard to their quality and workmanship compared with those of the imported article.

11. Kindly state the approximate weights and prices, if ascertainable, of steel castings forming parts of locomotives, carriages and wagons either imported and re-erected or built in India, by your railway for each year from 1921-22 onwards.

12. (*a*) Kindly furnish an estimate of the annual requirements of your railway during the next five years of steel castings:—

(1) for repairs and renewals of locomotives, wagons and carriages;

(2) as parts of locomotives, wagons and carriages imported and re-erected or built in India by your railway.

(*b*) To what extent will it be possible to meet these requirements from your own workshops?

13. Please state the quantity of steel castings used by you for general engineering purposes for each year from 1921-22 onwards. To what extent have your requirements of these been met from your own workshops?

14. Please state the prices per cwt. at which your railway has purchased steel castings for general engineering purposes in each year from 1921-22 onwards.

N.B.—For castings purchased from the United Kingdom or the Continent, please give the particulars specified in question 5.

15. Please give an approximate estimate of your requirements of steel castings for general engineering purposes for the next five years.

16. Has your Railway as yet adopted any definite scheme for the replacement of cast iron with steel axle boxes? If so, how long is the process of replacement likely to take and what will be your annual requirements of steel axle boxes under this scheme?

17. How does the durability of the steel axle box compare with that made of cast iron?

18. Please state what is the present position as regards the adoption of Automatic Centre Buffer Couplers. On the assumption that your railway decide on this course, has any definite scheme been framed, and, if so, what will be your total requirements and your annual requirements for each of the next 5 years?

19. Please state whether, in your opinion, all the necessary castings for Automatic Centre Buffer Couplers can be made out of materials available in India. If you do not consider this possible, please give your reasons.

20. What has been the average annual amount of steel scrap which your railway has placed on the market each year since 1921-22, and what has been the average price per ton realized f.o.r. works. How much of this scrap consisted of borings, turnings, shavings, etc., and what was the average selling price per ton f.o.r. works?

21. Please state the location of your principal workshops and the railway freight per cwt. for the carriage of castings from Calcutta to the workshop. For imported castings please state also the railway freight from the port of importation to the workshop.

22. In the event of the industry making out a case for the grant of protection, have you any views as to the form which this protection should take?

VI.—Replies to questionnaires regarding Steel Castings and Spring Steel.

Letter from the Railway Board, dated the 8th June 1926.

With reference to your letter No. 226, dated the 10th May 1926, I am directed to reply as follows to questions 1 to 3, 18, 19 and 22.

1. Lists A, B and C of the principal steel castings required for locomotives, carriage and wagon underframes respectively are attached. It will be observed that practically all the castings required are included in the list of castings which the Hukumchand Electric Steel Works Company claim to be in a position to manufacture.

2. Steel castings for locomotives, carriages and wagons have not yet been standardised in the strict sense of the term, but certain castings required for locomotives are interchangeable between two or more British Engineerings Standards Association types.

Detailed designs for new types of locomotives, carriage underframes and wagons are under preparation and detail parts will be standardised as far as practicable.

3. It is understood that the Hukumchand Electric Steel Works uses only steel scrap in its furnaces, and the Railway Board agrees generally with the remarks of the Tariff Board in paragraph 25 of its First Report on Steel castings on the question whether there are sufficient supplies of steel scrap in India. It is understood that the tendency is for the price of steel scrap to rise but the Tariff Board will be able to determine whether this tendency has manifested itself in the period that has elapsed since its First Report was written. Surplus steel scrap in India, it is believed, is at present largely exported to Italy.

The Railway Board does not understand exactly what is meant by "inherent difficulty" in manufacture. Expert supervision is, of course, necessary, and it is believed that satisfactory quality can be ensured only if there is continuous chemical supervision of manufacture. If this is so, the necessity for maintaining a whole-time chemist must constitute a considerable addition to the overhead charges of the firm, especially so long as those overhead charges have to be spread over a comparatively limited output. The Tariff Board, however, will no doubt be able to compare the price which the Hukumchand Electric Steel Works Limited has to charge in order to secure a fair profit with the actual prices paid by the railways for the steel castings which they import. The only other remarks which the Railway Board has to make is that articles such as steel axle boxes are very difficult castings. Certain English firms specialise in them and have attained a very high standard of efficiency. It will no doubt be a long time before the Hukumchand Electric Steel Works can expect to reach the same standard.

18. The whole question is still under investigation, and in view of the many difficult problems that must be fully considered before a final decision is arrived at, it is not possible at present to foresee or estimate the requirement of railways for the next five years.

19. For the reasons expressed in the paragraph *ante*, no opinions can at present be formulated.

22. The Railway Board would prefer not to express an opinion beyond saying that they are averse to any form of protection which, by raising the charges to railways, would re-act adversely on the cost of transportation.

Enclosure I.

LIST A.

Principal Steel Castings required for locomotives.

1. Hind drag box.
2. Front drag box (tender).

3. Frame stretchers.
4. Platform supports.
5. Piston body.
6. Wheel centres.
7. Axle boxes.
8. Horn blocks.
9. Axle-box guides.
10. Truck frame cross stretchers.
11. Bogie centre.
12. Bogie centre carrier.
13. Motion plates.

Enclosure II.

LIST B.

CARRIAGES.

Underframe.

1. Queenposts.
2. Top and bottom Bolster Spring bearings.
3. Bolster end spring cap.
4. Bolster Hanger guide brackets.
5. Bolster side wearing block.
6. Top and bottom side bearer.
7. Wheel centres.
8. Axle boxes.

Enclosure III.

LIST C.

Wagons.

1. Bearing Spring brackets.
2. Bearing Spring Hangers.
3. Top centre castings and side bearer brackets.
4. Wheel centres.
5. Axle-boxes.

VII.—Letter from the Tariff Board, to the Railway Board, Simla, dated 29th May 1926.

With reference to the enquiry now being held by the Tariff Board under section (6) of the Steel Industry (Protection) Act, 1924, I am directed to enclose copies of representations received from the following companies:—

(1) The Indian Standard Wagon Company, Calcutta.

(2) Messrs. Burn & Co., Calcutta.

(3) Messrs. Jessop & Co., Calcutta.

(4) The Peninsular Locomotive Company, Bombay.

In the event of the Board finding it necessary to examine the Railway Board orally, these representations will form part of the material on which the examination will be based. In the meanwhile, it would be of very great assistance if the Board could be furnished with the views of the Railway Board on such of the important points which arise out of these representations as are summarised below:—

(1) The statement that the wagon building firms have been able to reduce their costs of production by reason of the fact that they have been able to use Continental materials such as axle-boxes, buffers, solebar stiffeners, etc., but that if the Railway Board were to insist upon the use of British materials, their costs would automatically increase (page 3 of Messrs. Burn & Co.'s representation). The Board would be glad to know whether there is any likelihood that the Railway Board will insist on the use of British materials.

(2) Messrs. Burn & Co.'s statement that, as the Indian Standard Wagon Company received an order for 1,750 wagons only against a tender for 2,000 wagons, this involved a loss of Rs. 133 on each wagon as the overhead charges had to be divided amongst the smaller number of wagons (pages 3 and 4 of Messrs. Burn & Co.'s representation). The Board would be glad to know the reasons which prevented an order being given to the Indian Standard Wagon Company for the full number of wagons for which the Company tendered.

(3) The Indian Standard Wagon Company and Messrs. Burn & Co.'s claim that together they can satisfy two-thirds of the demand for broad gauge wagons in India as their capacity has increased to 3,000 wagons per year in the case of the Standard Wagon Company and to 1,000 wagons *plus* 250 underframes in the case of Messrs. Burn & Co. (pages 4 and 5 of the same representation). The Board would be glad to know if the Railway Board consider this statement correct.

(4) The statement that the Tata Iron and Steel Company are now in a position to supply all kinds of steel utilised in wagon building with the exception of cast steel fittings (page 5 of the same representation). The Board would be glad to know if the Railway Board agree with this statement.

(5) The statement that it is difficult for the industry to judge "the progress made towards successful open competition with foreign" tenders by reason of the fact that the amount of bounty paid under the scheme of protection is not made public (pages 6 and 7 of the same representation). In this connection, the Board would be glad to be informed whether the facts are as stated and, if so, to know the reasons which render it expedient that the amount of bounty paid should be kept secret.

(6) The statement that in the absence of information as to the amount of the bounty paid, the industry is unable to state what increase in the present duty would furnish adequate protection (page 7 of the same representation). In this connection, the Board would be glad if it could be supplied with the following information in tabular form under the following headings for the whole period from the inception of the scheme of bounties up to date:—

1. Year.

2. Type of wagon or underframe.

3. Rate of bounty.

4. Total number of units of each type on which bounty was paid.

5. Firms to whom bounties were paid.

6. Total amount of bounty paid during the year.

(7) The statement that orders are not called for at regular and stated times each year (page 8 of the same representation). The Board would be glad to know if this statement is correct.

(8) The statement that the orders for carriage underframes are small as compared with those for wagons (page 8 of the same representation). The Board would be glad to know the reasons which prevent larger orders for carriage underframes being placed.

(9) The suggestion put forward by Messrs. Burn & Co. that protection to the construction of underframes should be given in one of the three following ways, the first being considered preferable:—

(*a*) A specific duty of Rs. 2,000 on each underframe subject to a reduction each year.

(*b*) An *ad valorem* duty of 26 per cent.

(*c*) A bounty of Rs. 1,250 on each underframe delivered before March 31st, 1928, and thereafter a bounty diminishing by Rs. 100 per annum on a number of underframes increasing by 50 from 350 to 600 until 1933-34 (page 11 of the same representation).

In this connection, the Board would be glad to know which of these methods the Railway Board would consider most suitable in the event of protection being given to underframes and what modification, if any, of the specific proposal put forward by Messrs. Burn & Co. it would propose.

(10) The statement that Tata's special soft steel has been approved by the Railway Board as a subsitute for Grade A Iron (page 13 of the same representation). The Board would be glad to know if this statement is correct.

(11) The claim that wagon forgings are a fit subject for protection, and that the duty thereon should be increased from 10 per cent. to 25 per cent. (page 13 of the same representation).

(12) The statement made by Messrs. Jessop & Co. that "a fair comparison was not made" between the tenders for wagons submitted by them on November 10th, 1925, and the foreign tenders submitted on that occasion (pages 11 and 12 of Messrs. Jessop and Company's representation). The Board would be glad to be informed of the exact facts.

(13) The statement that the Customs duty paid on stores imported on Government account is being refunded and that this has a detrimental effect on indigenous industries (page 21 of Messrs. Jessop and Company's representation). The Board would be glad to know whether this is a correct statement of the position, and, if it is, whether the Railway Board consider that any alteration of the rules is called for.

(14) The suggestion put forward by Messrs. Jessop and Company that a duty of 20 per cent. *ad valorem* should be levied on wagons and one of 15 per cent. *ad valorem* on underframes, if there is no duty on the steel used in their fabrication (page 23 of Messrs. Jessop & Co.'s representation). The Board would be glad to have the views of the Railway Board on this suggestion.

N.B.—Messrs. Jessop & Co. suggest that the duties they propose should be in addition to any compensating protection rendered necessary by the duties on unfabricated steel.

(15) The complaint of the Peninsular Locomotive Company that imported material already inspected before shipment is unnecessarily reinspected in India (*vide* pages 11 and 12 of their representation). The Board would be glad to have the views of the Railway Board on this point.

(16) The complaint of the Peninsular Locomotive Company that where material such as vacuum brake gear is purchased from agents in Calcutta,

the railway freight charged on it is that for railway material, whereas if it is imported direct by the Company, railway freight is charged at full rates (*vide* pages 12 and 13 of their representation). The Board would be glad to have the views of the Railway Board on this point.

(17) The Peninsular Locomotive Company claim to be able to make 100 wagons per month. The Board would be glad to know if the Railway Board consider this statement to be correct.

I am to add that the Tariff Board would welcome an expression of the Railway Board's opinion on any points in the representations which have not been specifically mentioned above.

2. I am also to invite a reference to my letter to you No. 327, dated the 4th July, 1925, and your reply thereto, dated the 21st July, 1925, printed at page 380 *et seq.* of the evidence recorded during the enquiry regarding the grant of supplementary protection to the Steel Industry. The Board would be glad if the information then supplied could be brought up to date, with the addition of a column in enclosures I, II and VI showing the number of units for which orders were actually placed where this differed from the number tendered for.

3. I am further directed to invite a reference to the Board's telegram, dated the 17th August, 1925, and to your note regarding wagon bounties printed on page 390 of the said volume. The Board would be glad if this note could be brought up to date, and in particular if any changes which have taken place, in the method of administering the bounty either in consequence of the recent amendments made in the law or for any other reason, could be fully explained.

4. I am also to enclose a copy of the questionnaire which has been addressed to individual Railway Companies and to say that the Board would be glad if the Railway Board would furnish it with answers to such of the questions as come within the province of the Railway Board and are not likely to be covered by the information supplied by the Railway Board in response to paragraphs 2 and 3 of this letter or by the companies in their replies to the questionnaire.

5. In considering the question whether a specific or an *ad valorem* duty should be substituted for the bounties at present paid on the construction of wagons and underframes, the Tariff Board will have to examine the effect of such a duty on (*a*) the State railways, (*b*) the Company railways and (*c*) on the contribution received by General from Railway Revenues, under the scheme of the separation of Railway from General finances. It will also be necessary for the Tariff Board to consider the effect of the discontinuance of bounties and the levy of a duty on the Revenues of the State as a whole. The Board would be glad if it could be supplied with a statement which will assist it in understanding the position from this point of view with reference to 1926-27, or if figures for this year are not yet available then for 1925-26. For the purposes of calculation the following assumption may be made:—

(1) That the amount of duty is the equivalent of the average amount of bounty paid per unit, and is in addition to the present *ad valorem* duty of 10 per cent.

(2) That the price of all wagons and underframes, whether manufactured locally or imported, will increase to the full extent of the duty.

6. The Board would be grateful if the information asked for, or so much of it as can be collected in the time, could be supplied by about the 18th of June next, in order that it may be available for the public examination of the Indian Standard Wagon Company and of Messrs. Burn & Co., which is fixed for the 21st of June, 1926.

VIII.—Questionnaires issued by the Tariff Board to the Railway Board and Railways.

Railway Wagons.

1. What is the total number of wagons and coaches used by your railway on the broad and metre gauges respectively? How many of these are of the main types?

2. Please state the present position in regard to the standardisation of types both of wages and coaches and whether your Company contemplates a reduction in the number of types and if so, to what extent.

3. Please state—

(*a*) your requirements since 1923-24 of each type of wagon and coach, or

(*b*) your requirements in 1926-27 and

(*c*) your average requirements for each of the five years subsequent to 1926-27 in so far as it may now be possible to estimate them.

4. Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of wagon and underframe:—

(1) Date on which the tenders were opened.

(2) Type of wagon or underframe for which tenders were sent in and whether broad gauge or metre gauge.

(3) Number of units of each class stated in the call for tenders.

(4) The three lowest British tenders.

(5) The three lowest Continental or American tenders and the country from which they were sent in.

(6) The Indian tenders and the names of the firms tendering.

(7) The price and other conditions subject to which the order was placed and the name of the firm to which it was given.

(8) The number of units for which the order was actually placed.

N.B.—If any of the British, Continental or American tenders were ruled out on grounds other than price they should be excluded in determing which tenders should be treated as the three lowest.

2. In order that the prices tendered by European or American firms may be comparable with the Indian tenders, certain additions, *e.g.*, for lighting equipment, hand brakes, step irons and the like, have to be made to the price actually tendered by the foreign manufacturer and the prices entered in the statements should indicate and include the necessary adjustments.

5. With reference to clause (7) of question 4, please give the lowest British, Continental and American prices for each type of wagon and underframe in the following form:—

(*a*) Price f.o.b. port (in sterling).

(*b*) Freight, insurance and freight brokerage (in sterling).

(*c*) Total c.i.f. price (in rupees).

(*d*) Rate of exchange taken for conversion purposes.

(*e*) Customs duty (in rupees).

(*f*) Landing, wharfage and port charges (in rupees).

(*g*) Estimated cost of erection (in rupees) in the following form:—

1. Labour, etc.
2. Stores.
3. Supervision, overhead charges, etc.

(*h*) Total cost (in rupees).

6. Do you build wagons or carriage underframes in your own workshops? If so, please give the present cost excluding that of wheels and axles of a typical unit of each class of (*a*) wagon completely erected and ready to run and (*b*) underframe, under the following headings:—

I. Works Costs.

Type and description of $\frac{\text{Wagon, B.G., M.G.}}{\text{Underframe, B.G., M.G.}}$.

	Weight.	Rate.	Value.
1. Materials, *e.g.*—			
Steel, Indian			
Steel, Imported British			
Steel, Imported Continental			
Castings, Indian			
Castings, Imported British			
Castings, Imported Continental			
Fittings			
Other materials			
Stores, etc.			
2. Cost above materials—			
Power			
Fuel			
Labour			
Repairs			
General works supervision			
Nett cost per unit of output			
Total number of units of each type turned out in the year.			

7. Please state the total quantities, weight and price per set of wheels and axles—

(*a*) British,
(*b*) Continental,

purchased by your railway for each year from 1922-23 to 1925-26. In the case of Continental wheels and axles please distinguish the country of origin.

8. For both British and Continental wheels and axles, kindly state, where possible, the sterling f.o.b. prices, charges for freight, landing, etc., separately. If this is not possible, kindly state the c.i.f. price in sterling.

9. (*a*) If you have purchased or propose to purchase Continental wheels and axles, kindly state fully the considerations which have influenced you in doing so.

(*b*) What specifications, if any, are prescribed for Continental wheels and axles? Are any arrangements made for the inspection of such wheels and axles during manufacture? What arrangements, if any, are made for the testing of such wheels and axles in the country of origin?

10. What has been your experience in regard to the quality of Continental wheels and axles?

11. Has any progress been made since the Board's enquiry in 1923-24 towards the adoption for wagon axles, tyres and springs of the alternative British standard specifications or any other specifications which permit the use of basic open hearth steel for these purposes? If not, why not?*

12. A proposal has been made for the abolition of the system of bounties now in vogue and for the substitution of an *ad valorem* or a specific duty on imported wagons and underframes. In the event of the proposal being accepted, please state to what extent the annual capital or revenue expenditure of your railway would be increased for every Rs. 10 of duty levied on a wagon or an underframe on the assumption that the price was increased to the full extent of the duty.

13. Please state whether, in your opinion, the wagon building industry in India has now reached a stage when it can efficiently meet most of your requirements in regard to wagons and underframes. If you consider that it has not done so, please state in what respect you consider that it still falls short of the requisite standard.

14. Please state to what extent your requirements as to wagons and underframes are obtained through the Railway Board.

15. Please describe briefly the procedure followed in the purchase of wagons and carriage underframes when it is effected without the intervention of the Railway Board and state how far the rules for the purchase of articles for the public service issued by the Government of India are applicable to, or are followed by, your railway.

Locomotives.

1. What is the total number of locomotives used by your railway on the broad and metre gauges respectively? What are the main types of these and how many locomotives are there of each type?

2. Please state the present position in regard to the standardisation of types of locomotives and whether your Company contemplates a reduction in the number of types.

3. Please state—

(*a*) Your requirements since 1923-24 of each type of locomotive,

(*b*) your requirements in 1926-27, and

(*c*) your average requirements for each of the five years subsequent to 1926-27 in so far as it may now be possible to estimate them.

4. Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of locomotive:—

(1) Date on which the tenders were opened.

* *Vide* questionnaire II (*c*) dated 26th September 1923, page viii, Volume III of the evidence recorded during the enquiry into the Steel Industry.

(2) Type of locomotive for which tenders were sent in and whether broad gauge or metre gauge.

(3) Number of units of each class stated in the call for tenders.

(4) The tenders received.

(5) The price at which and other conditions subject to which the order was placed and the name of the firm to which it was given.

(6) The number of units for which the order was actually placed.

N.B.—If the locomotives are not received complete and ready to run, please state exactly what additions have to be made to the price quoted in the tenders in order to arrive at the price of the complete locomotive.

5. With reference to clause (5) of question 4, please give the particulars of the prices quoted in the tenders in the following form:—

(*a*) Price f.o.b. port (in sterling).

(*b*) Freight, insurance and freight brokerage (in sterling).

(*c*) Total c.i.f. price (in rupees).

(*d*) Rate of exchange taken for conversion purposes.

(*e*) Customs duty (in rupees).

(*f*) Landing, wharfage and port charges (in rupees).

(*g*) Estimated cost of erection (in rupees) in the following forms:—

1. Labour, etc.
2. Stores.
3. Supervision, overhead charges, etc.

(*h*) Total cost (in rupees).

6. Do you build locomotives in your own workshops? If so, please give the cost of a typical unit of each under the following headings:—

I. Works Costs.

Type and description of locomotive.

	Weight.	Rate.	Value.
1. Materials, *e.g.*—			
Steel, Indian			
Steel, Imported British			
Steel, Imported Continental			
Castings, Indian			
Castings, Imported British			
Castings, Imported Continental			
Fittings			
Other materials			
Stores, etc.			
2. Cost above materials—			
Power			
Fuel			
Labour			
Repairs			
General works supervision			
Nett cost per unit of output			
Total number of units of each type turned out in the year.			

7. Please state to what extent your requirements as to locomotive are obtained through the Railway Board.

8. Please describe briefly the procedure followed in the purchase of locomotives when it is effected without the intervention of the Railway Board.

9. The Peninsular Locomotive Company have stated that the requirements of the Government Railways for spare parts for locomotives would keep several factories of the size of the Peninsular Locomotive Company's works in full employment. The Tariff Board would be glad to know—

(1) if your railway consider this statement correct;

(2) the policy of your railway with regard to the manufacture of spare parts for locomotives;

(3) to what extent your railway is prepared to place orders for these spare parts with outside firms provided the firms could efficiently manufacture them.

IX.—Replies to questionnaire regarding Wagons.

(1). *Letter from the Railway Board, dated the* *July 1926.*

I am directed to send the following replies to the questions put to the Railway Board in your letter, dated the 29th May 1926.

2. Paragraph 1 (1) of your letter. The Railway Board have no information which would enable them to judge whether the statement made by Messrs. Burn & Co. is accurate. They have no intention of specifying that only British material should be used in the manufacture of wagons, and are entirely ignorant of the grounds on which Messrs. Burn & Co. allege that this is possible.

3. Paragraph 1 (2) of your letter. In determining where to place orders for wagons (as for other railway material) the Railway Board have at the very outset to consider whether a tendering firm is likely to be able to deliver the number of wagons, for which it has tendered, in the year in which they are required to carry traffic. When they were dealing with the tenders for supply in 1926-27, they were advised that it was unlikely that the Indian Standard Wagon Company could turn out more than 1,750 wagons in 1926-27; and they therefore, on December 5th, 1925, offered the Company an order for this number. Up to the end of May 1926, no wagons had been delivered against this order.

In offering an order for a smaller number of wagons than the Company had tendered for, the Railway Board were acting strictly in accordance with the conditions specified in the call for tenders which stated that they did not bind themselves to accept the lowest tender, the whole of a tender, or any tender; and it was of course open to the Company to refuse the order on the ground of the reduction in the number of wagons. The Railway Board further admit no obligation to place with any wagon-building firm an order for wagons up to the firm's estimate of its capacity.

4. Paragraph 1 (3) of your letter. The Railway Board are not in a position to express a considered opinion on the capacity of the Indian Standard Wagon Company and Messrs. Burn & Co., to turn out broad gauge wagons; or to give an estimate of the number of wagons which Indian Railways may require annually in future.

5. Paragraph 1 (4) of your letter. Here again the Railway Board are unable to express a considered opinion of their own; but they understand from the Indian Stores Department that the Tata Iron and Steel Company can manufacture all kinds of steel laid down in the Indian Railway Conference Association's specification for wagons, except steel castings and steel for axles and tyres.

6. Paragraphs 1 (5) and (6) of your letter. A separate reply will be sent.

7. Paragraph 1 (7) of your letter. The statement is correct.

8. Paragraph 1 (8) of your letter. The Indian Railways place orders for all the underframes that they need for additions and renewals to coaching stock. The number is ordinarily much smaller than the number of wagons required as additions to or replacements of goods stock.

9. Paragraphs 1 (9), (11) and (14) of your letter. The Government of India, Railway Department (Railway Board), hope to have the advice of the Tariff Board on these questions, before a decision is reached.

10. Paragraph 1 (10) of your letter. In certain individual instances the Railway Board have permitted the substitution of Tata's special soft steel for Grade A iron where the latter is specified in the specification for wagons; they have not as yet generally approved the substitution.

11. Paragraph 1 (12) of your letter. A separate reply is being sent.

12. Paragraph 1 (13) of your letter. There is no refund of customs duty on stores imported for either State-managed or Company-managed railways.

13. Paragraph 1 (15) of your letter. This complaint has arisen from a recent case in which some imported axle guards were considered not entirely satisfactory, and further inspection and test was carried out which resulted in their being rejected. The whole question of the necessity of re-inspection in India of imported material inspected before shipment is at present being considered by the Railway Board and the Indian Stores Department.

14. Paragraph 1 (16) of your letter. Railway material rates are only applicable when consignments are supported by a certificate by a railway official that the material is *bonâ fide* for railway requirements; no distinction is made between local and imported consignments.

15. Paragraph 1 (17) of your letter. The Railway Board prefer to express no opinion on the Peninsular Locomotive Company's claim. The facts within their cognizance are as follows:—

In October 1924 an order was placed with the Peninsular Locomotive Company for 500 A-2 type wagons to be delivered at the rate of 40 per month with completion of the whole order by the 31st of March 1926. Up to the 31st March 1926 only 215 wagons had been delivered, the maximum delivered in any one month being 60. A further order for 215 A-2 wagons to be completed by the 31st of March 1926, was placed with the firm in March 1925, and an order for 265 A-2 wagons, to be completed by the 31st of August 1926, was also given to the firm at the same time. So far no wagons have been delivered against the last two orders and the dates of completion for the three orders have been extended to the 31st July 1926, the 31st October 1926, and the 31st of January 1927 respectively. The maximum number of wagons so far delivered in any one month has been 72.

16. Paragraph 2 of your letter. According to the information available in the office of the Railway Board the following are the only differences between the numbers of wagons and underframes for which tenders were called and the numbers for which orders were actually placed:—

Number of wagons tendered for.	Number of wagons for which orders were actually placed.
515 A-2	480 A-2
Number of underframes tendered for.	**Number of underframes for which orders were actually placed.**
Number 150 for East Indian Railway.	137

17. Paragraph 3 of your letter. The note which the Tariff Board desire is attached as Appendix A. No change has taken place in the method of administering the bounty on wagons.

18. Paragraph 4 of your letter. Replies are given in Appendix B to questions 2, 3 (c), 4, 5, 9, 11, 12, 13, 14 and 15, in the questionnaire accompanying your letter.

19. Paragraph 5 of your letter. A separate reply will be sent.

APPENDIX A.

Bounties on wagons.

In August 1925, the Railway Board issued a simultaneous call for tenders in India and abroad for 6,539 wagons to meet the combined requirements of Indian Railways during the year 1926-27. They at the same time, asked the Indian Stores Department to let them have an estimate of the manufacturing capacity of the wagon-building firms in India before the 10th of November 1925, the date on which the tenders were to be opened.

As bounties were to be paid on wagons manufactured in India during the year 1926-27, in accordance with the terms of section 4 of the Steel Industry (Protection) Act, 1924, it became necessary to consider what amount would be available for bounties on orders placed in India for delivery in 1926-27, and this gave rise to a difficulty.

The Steel Industry (Protection) Act, referred to, authorised the payment of not more than 7 lakhs of rupees by way of bounties upon wagons during each of the three years 1924-25, 1925-26, 1926-27. But, as was explained in the last report, only Rs. 2,85,600 could be paid by way of bounties during the year 1924-25 and since the Act did not allow the unspent balance from one year to be carried forward to another, the balance, *viz.*, Rs. 4,14,400 of the permissible total bounty in that year lapsed. During the year 1925-26, payment by way of bounty was limited to Rs. 7 lakhs but the amount due to be paid during that year on wagon orders placed under the bounty scheme aggregated to Rs. 10,73,400. It was therefore necessary to carry forward the excess over Rs. 7 lakhs on these orders, *viz.*, Rs. 3,73,400 into the year 1926-27, thus reducing the bounty money available on wagons to be delivered against new orders during the year 1926-27 to Rs. 3,26,600. This amount was considered insufficient for payment of bounties on further orders that might be placed with the wagon-building firms in India for manufacture during the year 1926-27, and in the circumstances it was considered necessary that legislation should be undertaken to increase the bounty money available for payment on orders to be placed for supply during the year 1926-27. Consequently it was proposed that legislation should be undertaken to utilise the lapse of Rs. 4,14,400 which occurred in 1924-25 for purposes of payment during 1926-27, in addition to the amount available, *viz.*, Rs. 3,26,600 after payment on orders previously placed. But there was insufficient time to undertake the desired legislation and as an alternative a resolution was introduced and passed in the autumn session of the Legislative Assembly of 1925 authorising Government to pay by way of bounties Rs. 21 lakhs during the three years 1924-25 to 1926-27 both inclusive without any limitation on payment during any one of the three years. This enabled the Government to increase the balance of bounty money available during 1926-27 by the amount short spent in the year 1924-25, thus increasing the amount of bounty to be paid during 1926-27 to Rs. 7,41,000.

This amount was utilised in full when placing the orders in December 1925, with the Indian wagon-building firms for 1926-27 requirements of railways and as according to the amended Steel Industry (Protection) Act, 1924, an amount of Rs. 19,40,000 is available for payment by way of bounties on orders for wagons and carriage underframes to be placed during 1925-26 and 1926-27, a balance of Rs. 11,99,000 is still available for payment on orders for wagons and coaching underframes to be placed before 31st March 1927.

APPENDIX B.

Reply to Questionnaire regarding Wagons.

Question 2.—A committee convened by the Railway Board in 1924 to enquire into the suitability of Indian Railway Conference Association standard type wagons and carriage underframes has recommended:—

(*a*) 13 types of broad gauge wagons in place of 16 I. R. C. A. broad gauge types.

(*b*) The standardisation of two types of special wagons.

(*c*) A new design for broad gauge carriage underframes in place of the I. R. C. A. design.

(*d*) 13 types of metre gauge wagons in place of 20 I. R. C. A. standard types.

(*e*) A new design for metre gauge carriage underframes in place of the I. R. C. A. standard designs.

(*f*) New designs for 26 types of wagons for narrow gauge railways for which no standard designs previously existed.

The Consulting Engineers are now preparing detailed designs in accordance with the recommendations of the Committee, and when the designs are ready only these new standard types will be obtained by State-managed railways. It is hoped they will also be adopted by Company-managed railways.

Question 3 (*c*).—So many factors, at present undetermined enter into the consideration of the number of wagons likely to be required in 1927-28 and in future years that the Railway Board regret that they are unable to put forward an estimate to which they could attach any value.

Question 4.—Statements I, II, III and IV attached give the required information for the years 1922-23, 1923-24 and 1926-27. Information regarding wagons for the years 1924-25 and 1925-26, and for underframes up to 1925-26, has been supplied with the Railway Board's letter 3188-S., dated the 21st July 1925. It is requested that the information supplied in these statements and in the Railway Board's letter of the 21st July 1925, may be treated as strictly confidential.

Question 5.—Statements V, VI, VII, and VIII attached give as far as possible, the required information. I am to request that the information given in these statements may be treated as strictly confidential.

Question 9.—Indents for wheels and axles for State-worked railways are forwarded to the Director General, India Store Department, London, who in placing orders is guided by the Stores Purchase Rules and acts under the direction of the High Commissioner for India.

Wheels and axles supplied by continental manufacturers have to conform to the Indian State Railway specification, a copy of which is attached.* Regarding arrangements for inspection and test, the attention is invited to paragraphs 2 and 6 of the specification.

Question 11.—The Consulting Engineers to the Secretary of State for India and the High Commissioner for India are preparing revised specifications in connection with the proposed new standard I. S. R. type wagons and carriage underframes, and until these specifications are received, the Railway Board are unable to reply.

Question 12.—The Railway Board regret that, as they are unable to estimate the number of wagons and underframes that Indian railways are likely to require annually as additions for replacements in future, they are not in a position to this question.

Question 13.—Subject to the following provisos the answer is in the affirmative:—

(*a*) There are certain designs of bogie wagons and underframes involving heavy steel press work which could not be undertaken by any of the wagon-building firms in India.

(*b*) All Indian wagon-building firms have to import the following components:—

Axle boxes,
Buffers complete,
Screw couplings,
Draw and buffing springs,
Vacuum brake work,
Bolts, nuts and rivets,

and in addition some firms have also to import:

Bearing springs,
Diagonals,
Cast steel sole bar, and
Stiffening brackets.

* Not printed.

Question 14.—For State-worked railways the Railway Board make arrangements to obtain all the standard type wagons required. For the non-standard types each railway makes its own arrangements. For carriage underframes, each State-worked railway arranges to make a simultaneous call in England and India for tenders, the results are then communicated to the Railway Board for decision. When the drawings and specifications for the new Standard carriage underframes have been prepared and approved, the Railway Board propose to make a simultaneous call for tenders for the requirements of as many Company-worked railways as are prepared to join in the call.

Question 15.—Non-standard type wagons required by State-worked railways are obtained either by placing an indent on the Director General, India Store Department, London, or by calling for simultaneous tenders.

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STATEMENT I.

Statement showing the tenders received and orders placed for certain B. G. and M. G., I. R. C. S. types of wagons excluding wheels and axles required by Railways during 1922-23.

Date of opening the tenders.	Types of which tenders were sent in.	No. of wagons to be ordered as stated in the call for tenders.	Three lowest British tenders.			Three lowest Continental or American tenders and the countries from which they were sent.			Indian tenders and the name of firms tendering.									The prices at which the orders were placed and the name of the firm to which it was given.			No. of unit for which orders were actually placed.
			1 Rs.	2 Rs.	3 Rs.	1 Rs.	2 Rs.	3 Rs.	Baroda State Mys.	Bando and Co.	Bengal Iron Co.	H. T. King & Bros.	Massey & Co.	Herman and Mohatta	Jessop & Co.	Burn & Co.	Indian Standard Wagon Co.	Price.	Name of firm.	Bounty in case of order placed in India.	
7th December 1923	A-1	1,650	4,360	Note.—The Director General was asked to telegraph lowest satisfactory quotations and therefore no information with regard to other tenders was received.					..	..	..	6,800	10,800	..	5,300	5,294	5,294	4,300	Metropolitan Company	Nil	550
	A-2	350	4,445						..	..	6,165	..	..	..	5,510	5,419	5,419	4,445			50
	A-3	350	4,586						..	..	..	..	..	..	5,625	5,668	5,668	4,586			50
	C-1	250	4,018						..	..	..	..	..	6,750	5,110	4,886	4,886	..			..
	C-2	350	4,167						..	..	..	..	..	..	5,210	5,069	5,069	..			..
	C-3	250	4,345						..	..	..	..	..	..	5,430	5,417	5,417	..			..
	MA-1	250	3,990						..	4,000	..	..	..	..	3,761	3,816	3,815	..			..
	MA-2	300	3,465						4,880	4,500	..	..	..	..	3,883	3,900	3,900	..			..
	MA-3	250	3,495						..	..	..	..	..	..	3,930	4,026	4,026	..			..

Note 1.—All Indian tenders were rejected, the rates being too high. The Government of India however placed orders for building 100 A-1 wagons with Messrs. Burn & Co., at a price at which similar English wagons were to be delivered in India.

Note 2.—The number of wagons for which tenders were invited included the requirements of both Company- and State-worked Railways. The number ordered as shown in this statement is for the State-worked Railways only. The company-worked Railways were asked to place orders for their requirements at the rate recommended by the Director General, India Store Department, London.

STATEMENT II.

Statement showing the tenders received and orders placed for certain B. G. and M. G. I. R. C. A. types of wagons excluding wheels and axles required by Railways during 1923-24.

Date of opening the tenders.	Types of which tenders were sent in.	No. of wagons to be ordered as stated in the call for tenders.	Three lowest British tenders.			Three lowest Continental or American tenders and the countries from which they were sent in.			Indian tenders and the name of firms tendering.							The prices at which the orders were placed and the name of the firm to which it was given.			No. of units for which orders were actually placed.
			1 Rs.	2 Rs.	3 Rs.	1 Rs.	2 Rs.	3 Rs.	Bando & Co.	Balmer Lawrie & Co.	H. T. King Bros.	Herman and Mohatta	Jessop & Co.	Burn & Co.	Indian Standard Wagon Co.	Allcock Ashdown.	Price.	Name of firm.	Bounty in case of order placed in India.	
17th October 1923	A-1	1,030	3,404	3,611	3,627	4,103 Belgium	5,370 France	5,842 German	3,950	4,886	6,490	5,085	5,223	5,179	5,179	9,609	3,404	Metropolitan C. & W. & Finance Co.	*Nil*	530
	A-2	615	3,010	3,685	3,693	4,104 Belgium	5,707 France	6,603 German	4,050	..	6,990	5,490	5,316	5,286	5,286	9,900	..	....	*Nil*	..
	A-3	230	3,957	4,010	4,040	4,287 Belgium	4,701 Belgium	6,622 France	4,650	..	7,190	5,700	5,321	5,455	5,455	10,250	3,957	Metropolitan C. & W. & Finance Co.	*Nil*	180
	C-2	310	3,407	3,435	3,457	3,702 Belgium	4,191 Belgium	5,106 France	3,850	..	6,490	4,895	5,044	4,897	4,897	9,300	..	....	*Nil*	....
	C-3	200	3,426	3,457	3,474	3,434 Holland	3,698 Belgium	4,064 Belgium	..	..	6,490	4,630	5,373	4,889	4,889	9,350	3,424	Cravens Ry. C. & W. Co.	*Nil*	50
	BA-1	100	7,599	7,716	8,168	8,582 Belgium	9,302 Belgium	11,203 France	..	..	..	..	..	11,291	11,791	..	7,599	Birmingham Ry. C. & W. Co.	*Nil*	100
	BD-1	37	6,911	7,044	7,543	7,281 Belgium	8,361 Belgium	9,829 France	..	..	..	..	..	10,241	10,686	..	6,911	Cravens Ry. C. & W. Co.	*Nil*	25
	MA-1	685	2,352	2,369	2,688	3,139 Belgium	5,501 Belgium	5,507 Belgium	2,550	..	5,000	4,080	3,903	3,444	3,444	..	..	....	*Nil*	....
	MBD-1	25	4,783	4,876	5,625	6,044 Belgium	6,176 Belgium	7,506 France	..	..	..	5,195	..	7,208	7,208	..	..	....	*Nil*	....

N.B.—The number of wagons for which tenders were invited includes the requirements of both Company- and State-worked Railways. The number ordered as shown in this statement is for the State-worked Railways only. The Company-worked Railways were asked to place orders for their requirements at the rates recommended by the Director General, India Store Department, London.

STATEMENT III.

Statement showing the tenders received and orders placed for certain Broad and Metre gauge Indian Railway Conference Association type of wagon required by Railways during the year 1926-27.

Date of opening the tenders.	Types of which tenders were sent in.	No. of wagons ordered as stated in the call for tenders.	Three lowest British tenders.			Three lowest Continental or American tenders and the countries from which they were sent in.			Indian tenders and the name of firms tendering.				The prices at which the orders were placed and the name of the firm to which it was given.			No. of units for which orders were actually placed.
			1	2	3	1	2	3	Peninsular Loco. Co.	Jessop & Co.	Burn & Co.	Indian Standard Wagon Co.	Price.	Name of firm.	Bounty in case of order placed in India per wagon.	
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.							Rs.	
16th November 1926	A-1	2,416	3,081	3,157	3,161	3,171 American	3,178 Belgium	3,267 France	..	3,495	3,379	..	3,495 and 3,063	Messrs. Jessop & Co. Metropolitan C. W. & Finance Co.	402 276	1,493 1,143
	A-2	1,143	3,194	3,207	3,237	3,318 Belgium	3,356 German	3,460 Holland	4,098	3,573	3,470	..	3,470 and 3,573	Messrs. Burn & Co. Messrs. Jessop & Co.	379 ..	.. ..
	C-2	1,426	2,997	3,001	3,104	2,892 France	3,089 German	3,133 America	3,068	3,491	..	3,110	3,110	Messrs. Indian Standard Wagon Co.	113	1,426
	C-3	623	2,915	3,059	3,088	2,929 France	3,088 Holland	3,221 America	..	3,586	..	3,259	3,250 and 3,088	Ditto Metropolitan C. W. & Finance Co.	335 ..	623 ..
	J-1	11	5,745	5,876	5,923	5,111 France	5,922 German	6,059 German	..	..	..	..	5,937	Ditto	..	11
	K-1	10	7,042	7,633	7,832	6,837 France	8,017 German	8,050 German	..	..	..	..	7,915	Ditto	..	10
	MA-1	327	2,238	2,260	2,264	2,213 Belgium	2,255 French	2,459 France	..	2,284	..	..	2,230	Ditto	..	
	MA-2	260	2,239	2,306	2,427	2,239 German	2,442 Belgium	2,489 France	..	2,750	..	..	2,239	Ditto	..	
	MC-1	55	2,972	2,159	2,274	1,937 German	2,070 France	2,424 German	..	2,674	..	..	2,086	Ditto	..	
	MC-2	90	2,194	2,223	2,274	2,016 German	2,164 France	2,517 German	..	2,704	..	..	2,164	Ditto	..	
	MC-3	156	2,011	2,023	2,109	1,861 German	1,967 France	2,305 France	..	2,824	..	..	2,011	Ditto	..	
	MX	2	4,950	4,988	5,445	5,464 German	5,554 France	5,570 German	..	..	..	..	4,950	Ditto	..	

Note.—Orders with the Metropolitan Carriage, Wagon and Finance Company were placed subject to a lump sum reduction of £9,500 the total number of wagons ordered.

*Information regarding units for which orders were actually placed is not available in the office as orders relating to these types were placed by Company-worked railways direct.

STATEMENT IV.

Statement showing the prices tendered for the construction of underframes, excluding wheels and axles for 1926-27 requirements of State-worked Railways N. W. Ry. call for 176 underframes.

Date of opening the tenders.	Types of which tenders were sent in.	No. of underframes to be ordered as stated in the call for tenders.	Three lowest British tenders.			Three lowest Continental or American tenders and the countries from which they were sent in.			Indian tenders and the name of firms tendering.		The prices at which the orders were placed and the name of the firm to which it was given.			No. of units for which orders were actually placed.
			1 Rs.	2 Rs.	3 Rs.	1 Rs.	2 Rs.	3 Rs.	Jessop and Co.	Burn and Co.	Price.	Name of Firm.	Bounty in case of order in India.	
7th January 1926	No. IRCA standard prescribed tenders called for to N.W.R. approved existing designs.	D.G-178 (subsequently reduced to 160).	*8,541	8,795	No information is available as the Director General was asked only to telegraph the lowest satisfactory quotations.				12,779	..	8,541	Not known . .	*Nil*	160
					G. I. P. Ry. call for 98 (subsequently reduced to 93) underframes.									
28th April 1926	Underframe to a specification for a loaded coach of 46-5 tons to G. I. P. Ry. approved types.	11	9,411	9,844	10,112	9,660 German	9,886 German	10,708 German	9,607	10,397	9,607	Jessop & Co. . .	*Nil*	11
	Underframe to a specification for a loaded coach of 40 tons to G. I. P. Ry. approved designs.	66 (subsequently reduced to 60).	9,411	9,656	9,844	9,660 German	9,886 German	10,708 German	9,550	10,283	9,550	Do. . .	*Nil*	60
	Underframe to a specification for a loaded coach of 32 tons, to G. I. P. Ry. approved designs.	22	9,886	10,347	10,554	9,793 German	10,406 German	11,371 German	9,694	10,887	9,694	Do. . .	*Nil*	22

* For details as to how this figure was arrived at please see statement below.

STATEMENT V

Cost of one wagon delivered on line in India less wheels and axles and door arrestors, 1922-23.

Type.	A-1.	A-2.	A-3.	Remarks.
	£ s. d.	£ s. d.	£ s. d.	
(*a*) Price f. o. b. port	241 0 0	249 0 0	257 0 0	
(*b*) Freight, interest, insurance and freight brokerage	20 7 7	21 16 3½	22 19 7	
(*c*) Total c. i. f. price	261 7 7	270 16 3½	279 19 7	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	
(*d*) £ converted into rupees at Rs. 15 £1.	3,920 11 0	4,062 3 6	4,199 11 0	
(*e*) Customs duty at 2½ per cent. on c. i. f.	98 0 0	101 8 0	105 0 0	
(*f*) Landing, wharfage and port charges				
(*g*) Erection—				
1. Labour, etc.	370 0 0	370 0 0	370 0 0	*Separate figures for labour, stores, supervision, overhead charges, etc., are not available.
2. Stores				
3, Supervision, overhead charges,* etc.				
(*h*) Total Cost	4,388 11 0	4,533 11 6	4,674 11 0	
(*i*) *Deduct* for door arrestors not supplied	88 5 0	88 5 0	88 5 0	
Net Cost	4,300 6 0	4,445 6 6	4,586 6 0	

STATEMENT VI.

Cost delivered on line in India of an imported wagon less wheels and axles and door arrestors, 1923-24.

Type.	A-1.	A-3.	C-3.	BA-1.	BD-1.	Remarks.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
(a) Price f. o. b. port . . .	171 0 0	192 0 0	173 0 0	379 0 0	342 0 0	
(b) Freight, interest, insurance and freight brokerage.	19 3 9	21 17 9	20 13 0	45 10 0	40 16 4	
(c) Total c. i. f. prices . . .	190 3 9	213 17 9	193 13 0	424 10 0	362 16 4	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
(d) £ converted into rupees at Rs. 15 =£ 1.	2,852 13 0	3,208 5 0	2,905 9 0	6,367 8 0	5,742 4 0	
(e) Customs duty at 10 per cent. on c. i. f.	285 4 6	320 13 4	290 8 11	636 12 0	574 3 7	
(f) Landing, wharfage and port charges.*						
(g) Erection—						
1. Labour, etc. . . .	356 4 0	428 0 0	228 8 0	595 0 0	594 13 0	*Separate figures for labour, Stores, Supervision, overhead charges, etc., are not available.
2. Stores						
3. Supervision, overhead charges, etc.						
(h) Total cost	3,494 5 6	3,957 2 4	3,424 9 11	7,599 4 0	6,911 4 7	

STATEMENT VII.

Lowest quotations given in the tenders received in response to Railway Board's last simultaneous call for tenders for wagons in India and abroad for 1926-27 requirements of railways.

All quotations are basic and do not include the price of wheels and axles or modifications in detail.

Type of wagon Tare of body in tons.	A-1 7·11	A-2 7·7	C-2 7·7	C-3 7·15	J-1 11·2	K-1 13·1	MA-1 4·51	MA-2 4·77	MC-1 4·11	MC-2 4·3	MC-3 3·8	MX 5·7
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Price f.o.b. . .	176 0 0	182 0 0	171 15 0	168 5 0	305 0 0	386 0 0	126 9 0	133 0 0	112 0 0	116 0 0	108 0 0	204 0 0
Seafreight at £2 5 *s.* per ton.	15 19 11	17 6 1	17 6 1	16 3 4	25 4 0	29 9 6	10 2 1½	10 14 8	9 5 0	9 13 6	8 11 0	12 16 6
Freight brokerage 9 *d.* per ton.	0 5 4	0 5 9	0 5 9	0 5 4	0 8 5	0 9 9	0 3 5	0 3 8	0 3 8	0 3 3	0 3 0	0 4 6
Insurance at 4 *s.* per £100.	0 7 1	0 7 4	0 6 10	0 6 9	0 12 3	0 15 6	0 5 0	0 5 4	0 4 6	0 4 8	0 4 4	0 8 2
Interest at £1¼ per £100.	2 4 0	2 5 6	2 3 0	2 2 0	3 16 3	4 16 6	1 11 6	1 13 3	1 8 0	1 9 0	1 7 0	2 11 0
TOTAL £ .	194 16 4	202 4 8	191 16 8	187 2 2	335 1 0	421 11 3	138 11 10	145 16 11	123 0 7	127 10 5	118 5 4	220 0 2
Customs duty at 10 per cent.	19 9 7	20 4 4	19 3 8	18 14 3	33 10 0	42 3 2	13 17 2	14 11 8	12 6 1	12 15 0	11 16 6	22 0 0
Total in sterling .	214 5 11	222 9 0	211 0 4	205 16 5	368 11 0	463 14 5	152 9 0	160 8 7	135 6 8	140 5 5	130 1 10	242 0 2
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
Converted at 1*s.* 6 3/32*d.* to a rupee.	2,832 11 2	2,940 7 4	2,789 5 3	2,720 10 7	4,871 11 0	6,129 11 0	2,015 2 9	2,120 10 4	1,788 14 8	1,854 2 1	1,719 10 1	3,199 3 0
Erection, landing wharfage and port charges, etc., in India.	250 0 0	253 8 0	207 7 0	194 4 0	238 13 0	707 0 0	197 7 0	218 0 0	148 2 0	162 0 0	144 0 0	1,760 0 0
TOTAL Rs. .	3,082 11 2	3,193 15 4	2,997 0 0	2,914 14 7	5,110 8 0	6,836 11 0	2,212 9 9	2,338 10 4	1,937 0 8	2,016 2 11	1,863 10 0	4,959 0 0

STATEMENT VIII.

	Lowest foreign quotation in connection with N. W. R. call for tenders for 176 underframes.	Lowest British quotation for 11 and 60 underframes in connection with G. I. P. call for tenders for 98 underframes.	Lowest British quotation for 22 underframes in connection with G. I. P. call for tenders for 98 underframes.
	£. s. d.	£ s. d.	£ s. d.
(*a*) Price f. o. b. port (in sterling)	495 0 0	548 0 0	580 0 0
(*b*) Freight, interest, insurance and brokerage	69 10 0	71 11 0	71 18 10
	Rs. A. P.	Rs. A. P.	Rs. A. P.
(*c*) Total c. i. f. price (in rupees)	7,526 10 8	8,260 10 8	8,692 9 0
(*d*) Rate of exchange taken at 1*s.* 6*d.* to the rupee	....	....	....
(*e*) Customs duty in rupees	752 13 1	826 0 0	869 4 0
(*f*) Landing, wharfage and port charges—			
(*g*) Erection charges—			
(1) Labour	261 12 0*	324 0 0	324 0 0
(2) Stores			
(3) Supervision			
(*h*) Total cost in rupees	8,541 7 9	9,410 10 8	9,885 13 0
Or say	8,541 0 0	9,411 0 0	9,886 0 0

* Separate figures not available.

(2). *Letter from the Railway Board, dated the 28th August 1926.*

As promised I send herewith, a statement of the Peninsular Locomotive Company's output of wagons from the time of the first delivery up to and including July last.

Enclosure.

Monthly outturn of wagons on order with the Peninsular Locomotive Company, Limited.

October 1925	20	1st Consignment	Non-bounty wagons.
November 1925	30		
December 1925	33		
January 1926	32		
February 1926	40		
March 1926	60		
April 1926	72		
May 1926	53		
June 1926	60	"	
July 1926	60		
TOTAL	460		

An order for 500 A-2, non-bounty wagons for the G. I. P. Railway placed in October 1924, delivery to commence from May 1925 at the rate of 40 wagons per mensem, the whole order to be completed by the 31st March 1926. On representation date of completion extended to 31st July 1926.

2. Order for 215 A-2, bounty wagons for E. I. Railway placed in March 1925 for completion by 31st March 1926. No supplies made against this. Date of completion extended to 31st October 1926, on representation.

3. Order for 265 A-2 bounty wagons for E. I. Railway placed in March 1925 for completion by 31st August 1926. Date of completion extended to 31st January 1927 on representation. No supplies made against this as yet.

X.—Letter No. 334, dated the 4th June 1926, from the Tariff Board, to the Railway Board, Simla.

In continuation of my letter No. 307, dated the 29th May 1926, I am directed to enclose copy of a representation receive from the Peninsular Locomotive Company, Limited, in regard to protection for the Locomotive industry and to say that it would be of very great assistance to the Board if it could be furnished with the views of the Railway Board on such of the important points arising out of this representation as are summarised below:—

(1) The statement that the demand for locomotives in India was greatly under-estimated by the Tariff Board on pages 169 to 173 of its Report regarding the Grant of Protection to the Steel Industry, 1924, and that the annual requirements for Government Railways for the six years ending with 1925-26 have been as shewn in paragraph 2 of the representation. The Tariff Board would be glad to know if the figure given in that paragraph are correct, and, if so, the circumstances which have led to the estimate framed by the Board in 1924, which was based on information supplied by the Railway Board, being so largely exceeded.

(2) The statement that the inelasticity of the rules for the purchase of stores has prevented orders for locomotives and spare parts being placed with the Peninsular Locomotive Company (paragraph 7 of the representation). The Tariff Board would be glad to know how far the Railway Board consider this statement correct.

(3) The statement that considerable progress has been made with the standardisation of types of locomotives (paragraph 9 of the representation). The Tariff Board would be glad to know exactly what progress has been made in this direction.

2. I am to ask whether in the opinion of the Railway Board the Peninsular Locomotive Company is sufficiently well equipped for the efficient and economic manufacture of locomotives.

3. I am to ask that the Tariff Board may be furnished with four copies if they are available, and, if not, with one copy of the Report on the enquiry into the Locomotive Industry referred to in paragraph 12 of the representation.

4. On the assumption that a case is made out for the grant of protection to the Locomotive Building Industry, the Tariff Board would be glad to have the views of the Railway Board as to the way in which this protection should be given. If it were to be given in the form of a bounty the Board would also be glad to have the advice of the Railway Board with regard to the principle on which the bounties should be given and the manner in which they should be administered.

5. I am also to enclose a copy of the questionnaire which has been addressed to the individual railway companies and to say that the Board would be glad if the Railway Board would be so good as to furnish answers to such of the question as fall within the province of the Railway Board and are not likely to be covered by the information supplied by the Railway Board in response to paragraph 1 of this letter or by the railways in their replies to the questionnaire.

6. The Board would be grateful if the information asked for or so much of it as can be collected in the time, could be furnished by about the 30th June 1926, in order that it may be available for the public examination of the Peninsular Locomotive Company which has been provisionally fixed for the 8th July 1926.

XI.—Questionnaires issued by the Tariff Board to the Railway Board and Railways.

Locomotives.

1. What is the total number of locomotives used by your railway on the broad and metre gauges respectively? What are the main types of these and how many locomotives are there of each type?

2. Please state the present position in regard to the standardisation of types of locomotives and whether your Company contemplates a reduction in the number of types.

3. Please state—

(*a*) Your requirements since 1923-24 of each type of locomotive,

(*b*) your requirements in 1926-27, and

(*c*) your average requirements for each of the five years subsequent to 1926-27 in so far as it may now be possible to estimate them.

4. Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of locomotive:—

(1) Date on which the tenders were opened.

(2) Type of locomotive for which tenders were sent in and whether broad gauge or metre gauge.

(3) Number of units of each class stated in the call for tenders.

(4) The tenders received.

(5) The price at which and other conditions subject to which the order was placed and the name of the firm to which it was given.

(6) The number of units for which the order was actually placed.

N.B.—If the locomotives are not received complete and ready to run, please state exactly what additions have to be made to the price quoted in the tenders in order to arrive at the price of the complete locomotive.

5. With reference to clause (5) of question 4, please give the particulars of the prices quoted in the tenders in the following form:—

(*a*) Price f.o.b. port (in sterling).

(*b*) Freight, insurance and freight brokerage (in sterling).

(*c*) Total c.i.f. price (in rupees).

(*d*) Rate of exchange taken for conversion purposes.

(*e*) Customs duty (in rupees).

(*f*) Landing, wharfage and port charges (in rupees).

(*g*) Estimated cost of erection (in rupees) in the following forms:—

1. Labour, etc.
2. Stores.
3. Supervision, overhead charges, etc.

(*h*) Total cost (in rupees).

6. Do you build locomotives in your own workshops? If so, please give the cost of a typical unit of each under the following headings:—

I. Works Costs.

Type and description of locomotives

	Weight.	Rate.	Value.
1. Materials, *e.g.*—			
Steel, Indian			
Steel, Imported British			
Steel, Imported Continental			
Castings, Indian			
Castings, Imported British			
Castings, Imported Continental			
Fittings			
Other materials			
Stores, etc			
2. Cost above materials—			
Power			
Fuel			
Labour			
Repairs			
General works supervision			
Nett cost per unit of output			
Total number of units of each type turned out in the year.			

7. Please state to what extent your requirements as to locomotive are obtained through the Railway Board.

8. Please describe briefly the procedure followed in the purchase of locomotives when it is effected without the intervention of the Railway Board.

9. The Peninsular Locomotive Company have stated that the requirements of the Government Railways for spare parts for locomotives would keep several factories of the size of the Peninsular Locomotive Company's works in full employment. The Tariff Board would be glad to know—

(1) if your railway consider this statement correct;

(2) the policy of your railway with regard to the manufacture of spare parts for locomotives;

(3) to what extent your railway is prepared to place orders for these spare parts with outside firms provided the firms could efficiently manufacture them.

XII.—Replies to questionnaire regarding locomotives.

Letter from the Railway Board, dated the 7th July 1926.

I have been instructed to send you the following replies to the questions put to the Railway Board in your letter No. 334 of the 4th June 1926.

2. *Paragraph 1 (i) of your letter.*—The figures given in paragraph 2 of the Peninsular Locomotive Company's representation are taken from a reply given by the Hon'ble Mr. Chadwick on behalf of the Railway Department to a question by the Hon'ble Sir Phiroze C. Sethna in the Council of State on the 15th February 1926, and are correct *as the figures for all class I programme railways* except that it was eventually found possible to reduce the number of broad gauge locomotives required in 1925-26, from 206 to 111 by transfers between railways. Sir Clement Hindley's evidence before the Tariff Board related, as within his recollection he explained at the time solely to the requirements of standard types of broad gauge locomotives *for State-managed lines*, the placing of the orders for which can be controlled by the Railway Board; it did not refer to the requirements in addition *of the Company-managed* lines, which are owned by the State and included in the term class I programme railways, but are not subject to dictation by the Railway Board as to the placing of orders for locomotives. It seems possible, in view of the phraseology in paragraph 16 of your Board's third report, where the words "owned by Government" occur, that this distinction between State-managed and Company-managed railways, both owned by Government, was not fully realised.

For railways owned and managed by the State 14 broad gauge locomotives were ordered in 1924-25, 65 in 1925-26, and on present information 70 (and 3 metre gauge) are likely to be wanted in 1926-27. The estimate which Sir Clement Hindley, as your Board are aware, most reluctantly gave, was therefore an over, and not an under estimate. It happens, however, to be a close approximation to the actual requirements of broad gauge locomotives for all classes I railways in these three years which were 118 in 1924-25, 111 in 1925-26, and on present information, are likely to be 94 in 1926-27.

3. *Paragraph 1 (2) of your letter.*—The Railway Board have on no occasion been prevented by the Indian Stores Rules from placing orders for locomotives and spare parts with the Peninsular Locomotive Company.

4. *Paragraph 1 (3) of your letter.*—The statement is correct. The Consulting Engineers are at present preparing detailed designs and specifications for 5 types of broad gauge and 5 types of metre gauge engines, which it is intended eventually to adopt as standard types for Indian State-managed railways, and it is hoped that the Company-managed railways will also adopt. It does not of course, follow that these types will not subsequently be modified or even abandoned, or that new or additional types will not be introduced, as improvements in locomotive design are discovered.

5. *Paragraph 2 of your letter.*—The Railway Board are not in a position to express an opinion on this question, but they think it right to place the Tariff Board in possession of the opinion which they obtained from the State Railways Workshops Committee, presided over by Sir Vincent Raven, on the general question of the manufacture of locomotives in India. It is as follows :—

> "In the opinion of the Committee such manufacture calls for a much higher degree of skill and knowledge than the labour at present employed in the Indian Railway shops is capable of. For this reason the Committee considers that the building of locomotives in India could not at this juncture be carried out so as to compete with Home builders."

6. *Paragraph 3 of your letter.*—A separate reply is being sent.

7. *Paragraph 4 of your letter.*—The Government of India, Railway Department (Railway Board), hope to have the advice of the Tariff Board on these questions before any decision is reached on them.

8. *Paragraph 5 of your letter.*—So far as State-managed railways are concerned, replies to questions 2, 3 (*c*), 4, 5, 6, 7, 8 and 9, in the questionnaire sent by your Board to individual Railway Companies, and presumably also to railways managed by the State and not by Companies, can only be given by the Railway Board, I am, therefore to send in the enclosures to this letter the replies to those questions which the State railways will not be sending to you.

9. In conclusion, I am to say that the Railway Board have confined this letter to a reply to the definite points put to them in your letter (and the questionnaire, so far as State-managed railways could not properly reply to it): they have purposely refrained from discussing, as your Board indeed have not suggested that they should discuss, the arguments adduced in support of, or deductions drawn from these points by the Peninsular Locomotive Company; they trust that your Board will understand that they do not therefore accept these arguments or deductions as valid. But they are most anxious to place before your Board any further information in their possession which may be of assistance to them, though they are necessarily debarred from expressing opinions on possible recommendations of the Board with which the Government of India in the Railway Department may eventually be called upon to deal.

Enclosure.

Replies to questionnaire regarding locomotives.

Question 2.—Please see paragraph 4 of the covering letter.

Question 3 (b) and (c).—The requirements of State-managed railways for 1926-27 are at present estimated at 70 broad gauge and 3 metre gauge locomotives. So many factors, at present undetermined, enter into the consideration of the number of locomotives which it may be necessary to purchase in 1927-28 and subsequent years, that the Railway Board are not in a position to put forward estimates to which they could attach any value.

Questions 4 and 5.—Statements giving the information are appended.

Question 6.—No locomotives are built in State-managed railway workshops.

Question 7.—The Railway Board's approval is necessary to the requirements of all railways, whether State or Company-managed other than non-programme lines, and no estimates can be sanctioned or sent forward till programmes have been approved by the Railway Board. After the Railway Board's approval has been obtained, the High Commissioner for India calls for tenders for Government-managed railway requirements *plus* any locomotives of the same type which Company-managed lines have agreed to have included in the call. For State-managed railways the High Commissioner subject to instructions from the Railway Board, and for Company-managed railways the Boards of Directors, decide which tenders shall be accepted. Demands for Company-managed railways, other than those included in the High Commissioner's call for tenders, are arranged by the Companies' Boards of Directors.

Question 8.—On State-managed railways the Railway Board can, as stated in the reply to question 7, always intervene.

Question 9.—The Railway Board do not feel that they can express an opinion on this question.

Statement I containing information required under question 4 of the questionnaire.

Name of Railway.	Date on which tenders were opened.	Type of locomotive and whether broad or metre gauge.	Number of units of each class stated in the call for tenders.	Tenders received.	Price at which and other conditions subject to which the order was placed and the name of the firm to which it was given.	The number of units for which the order was actually placed.
E. I. R. . . .	26th February 1924 .	4-6-0 Superheated passenger B. G.	40	20	F.O.B., Liverpool £5,950 each Kerr Stuart & Co., London.	40
E. B. R. . . .	9th March 1923 .	Ditto .	3	Not known .	F.O.B., Glasgow £5,650 each W. Beardmore & Co., Glasgow.	3
O. & R. R. . .	6th March 1923 .	2-8-2 tank B. G. . .	2	Do. .	F.O.B., Birkenhead £4,476 each Beyer Peacock & Co., Manchester.	2
N. W. R. . .	August 1923 .	Ditto .	5	Do. .	F.O.B.., Manchester £4,580 each Beyer Peacock & Co., Ltd., Manchester.	5
N. W. R. . .	24th August 1923 .	4-6-0 B. G. . . .	5	Do, .	F.O.B., Glasgow £5,200 each W. Beardmore & Co., Ltd. Glasgow.	
E. B. R. . . .	25th January 1924	2-6-2 passenger type B. G.	5	Do. .	F.O.B., Hamburg £4,130 each Hannoversche Maschinebau Actien Gesellschaft Hanover.	5
E. B. R. . . .	26th February 1924 .	2-6-4 tank engines B. G.	6	Do. .	F.O.B., Liverpool £5,495-6-0 Kerr Stuart & Co., London.	6
O. & R. R. . .	Do. .	2-8-2 tank B. G. . .	5	Do.	F.O.B., Middlesborough £5,080 each R. W. Hawthorn Leslie & Co., Ltd.., Newcastle-on-Tyne.	4
E. B. R. . . .	Do. .	0-6-0 B. G. . . .	4	Do. .	F.O.B., Liverpool £5,159-10-0 Kerr Stuart & Co., London.	4
E. I. R. . . .	20th March 1925 .	2-8-0 goods type B. G.	1	Do. .	F.O.B., Humburg £6,200 Rheiniche Metallwarenund Maschinenfabrik Dusseldorf.	1
E. B. R. . . .	Do. .	2-6-4 Superheated passenger tank B. G.	5	Do. .	F.O.B., Hamburg £4,300 each Rheinesche Metallwarenund Maschinenfabrik Dusseldorf.	5
E. I. R . . .	5th May 1925 . .	0-6-0 tank heavy, short wheel base B. G.	2	Do.	F.O.B., Humburg £2,650 each Maschinenbau-Anslatt Humboldt Cologne-Kalk.	2
G. I. P. R. . .	23rd October 1925 .	2-8-2 B-1 class Narrow Gauge.	2	Do. .	F.O.B., Birkenhead £3,910 each Nasmyth Wilson & Co., Ltd., Manchester.	

Statement II containing information required under question 5 of the questionnaire.

Name of Railway.	Price f.o.b. port (in sterling).	Freight insurance and freight brokerage (in sterling).	Total c.i.f. prices (in rupees).	Rate of exchange taken for conversion purposes.	Customs duty (in rupees).	Landing, wharfage and port charges (in rupees).	Estimated cost of erection (in rupees):- 1. Labour, etc. 2. Stores 3. Supervision, Overhead charges, etc.	Total cost (in rupees).
	£ s. d.	£ s. d.		s. d.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
E. I. R.	5,950 0 0	627 8 0	£6,630 2 0	1 4½	2,448 0 0	465 *plus* 250 included freight.	2,500 0 0	1,03,582 7 7
		50 7 0	=Rs. 97,921 7 7					
		2 7 0						
E. B. R.	5,650 0 0	546 3 7	£6,245 7 9	1 4¼	2,306 0 0	327 8 4	1. 1,575 5 4	97,409 3 9
		48 0 5	=Rs. 92,239 9 1				2. 840 0 0	
		1 3 9					3. 121 0 0	
O. & B. R.	4,476 0 0	417 8 10	£4,931 10 8	1 4¼	1,820 14 0	Not known	Not known	...
		37 1 10	=Rs. 72,834 15 4					
		1 0 0						
N. W. R.	4,580 0 0	435 8 1	£5,052 15 10	1 4¼	1,865 10 5	425 3 2	510 5 2	79,761 5 3
		35 9 10	=Rs. 74,625 13 6				224 1 0	
		1 17 11					2,110 4 0	
N. W. R.	5,200 0 0	548 15 0	£5,789 8 11	1 4½	2,137 10 5	732 3 2	591 12 7	90,738 11 2
		44 10 3	=Rs. 85,505 10 7				195 14 5	
		1 3 8					1,575 8 10	

L. B. R. . . .	4,130 0 0	300 0 0	£4,484 19 6	1 4½	1,656 0 0	276 9 7	1,260 0 0	72,559 3 9
		53 3 2	=Rs. 66,239 10 2				315 0 0	
		1 16 4					2,792 0 0	
E. B. R. . . .	5,495 6 0	348 18 9	£5,916 1 4	1 4½	2,181 6 5	304 13 4	1,260 0 0	93,818 15 9
		70 1 7	=Rs. 87,375 12 0				315 0 0	
		1 15 0					2,379 0 0	
O. & R. R. . . .	5,080 6 0	386 11 3	£5,534 2 3	1 4½	2,043 6 0	Not known	Not known	
		65 12 0	=Rs. 81,734 9 4					
		1 19 0						
E. B. R. . . .	5,159 10 0	331 18 1	£5,558 5 0	1 4½	2,052 1 5	296 4 0	1,523 0 0	88,838 9 8
		65 1 11	=Rs. 82.091 1 3				472 0 0	
		1 15 0					2,404 0 0	
E. I. R. . . .	6,200 0 0	531 2 0	£6,814 10 11	1 6	2,271 8 3	Not known	Not known	
		80 15 5	=Rs. 90,860 9 9					
		2 13 6						
E. B. R. . . .	4 300 0 0	359 10 0	£4.717 1 3	1 6	1,572 6 5	292 9 7	1,575 0 0	66,966 2 0
		55 18 3	=Rs. 62 896 2 8				525 0 0	
		1 16 0					105 0 0	
E. I. R. . . .	2 650 0 0	Not yet available	.....			Not known	Not known	
G. I. P. R. . .	3,910 0 0	117 13 0	£4.076 14 8	1 6	1,358 14 7	1,460 0 0	387 0 0	58,075 5 8
		48 6 8	=Rs. 54,356 7 1				304 0 0	
		0 15 0					209 0 0	

XIII.—Use of Tata's Sections by Railways.

Letter from the Railway Board, No. 1251-B., dated the 13th September 1926.

The Tata Iron and Steel Company, Limited, have forwarded to the Railway Board a copy of a note presented by them to the Tariff Board, in which they make the accusation that the steel sections manufactured at Jamshedpur are ignored by Indian railways in designing the construction of bridges and other large works. So serious an accusation was immediately investigated by the Railway Board in consultation with the principal railway administrations, and I am to enclose, for the information of the Tariff Board, extracts giving the more important points in the replies received. In doing so, I am to say that the Railway Board entirely repudiate, both on their behalf and on behalf of the Agents of railway administrations, the charge that the Tata Iron and Steel Company Limited's sections are excluded purposely from the designs adopted by them; and at the same time to make it clear that neither the Railway Board nor railway administrations are prepared to spend additional money by designing bridges to suit the limited number of sections, which the Tata Iron and Steel Company Limited roll. Their view in fact, is that if the Company wish to secure a larger share of this business they must be prepared to roll the sections used in modern bridge design.

Extracts from replies received from Chief Engineers in regard to the note on the use of Tata's sections by Railways.

Bengal and North-Western Railway.—

" There is no desire to exclude sections rolled by Tata, from designs for structural steel work. In sending designs to firms for quotations I generally mention, ' that any slight variation of sections not affecting strength, to suit material in stock or which may be readily obtained, will be considered ' and it is up to firms to supply Tata sections if these are cheaper than other sources of supply. This latitude is appreciated by manufacturing firms and often leads to quite low quotations."

Madras and Southern Mahratta Railway.—

" The insinuations made by Messrs. Tatas are most uncalled for, and quite without foundation as far as we are concerned.

" As far as possible, when designing, I avoid the use of odd sections which may not be rolled in India or not obtainable except with difficulty.

" In my section book I have noted the sections rolled by Messrs. Tatas, but they are so few that we cannot possibly restrict ourselves to their use only. I have no record of the angles they roll, but taking I Beams and channels only the situation as far as I know it is thus:—

	New Standard Sections.	Old Standard Sections.
I Beams. Number of sections ordinarily rolled in England	18	30
I Beams. Rolled by Tatas . . .	3	5
Heavy I Beams. Ordinarily rolled . .	11	0
Ditto. Rolled by Tatas . .	0	0
Channels. Ordinarily rolled . . .	18	27
Ditto. Rolled by Tatas . . .	2	2

" So that out of a total of 104 sections old and new, Messrs. Tata demand that we restrict ourselves to 12. That is absurd. It is true that the old sections are supposed to be going out of use and the new coming in, and this makes the proportion look worse. But even supposing the old sections to have disappeared entirely the proportion would still be 47 to 11.

" If my information is not up to date all I can say is that it is Messrs. Tatas business to keep it so. Steel firms in England annually distribute very helpful pocket books showing incidentally the section they roll, standard and special. In the course of seven years I have seen two lists from Messrs. Tatas, the second one so badly got up and printed that it was difficult to understand. Moreover the information as to the angles rolled left so much to the imagination that it was useless. I pointed this out at the time, but did not receive an amended list. Hence the fact that I have no record of what angles Messrs. Tata roll is entirely their own fault.

" Apart from this, and excluding very unusual sections, Messrs. Tata must roll what people want if they expect to do business, not to try to force a great deal of extra work on Engineers in altering standard drawing to suit their sections."

Central Indian Coalfields Railway Construction.—

" The only item with which I am concerned is for an order in March 1926 for 12 feet girders. These are to be built according to Consulting Engineers' Drawing No. 369-26 (P. F.), Railway Board's D. B. No. 21524—26. You will see that all Angles are $3'' \times 3'' \times \frac{3}{8}''$ as stated by Tata's people. Again, the $7 \times 3\frac{1}{2} \times \frac{3}{8}''$ are only a very small item for the cleats. " We are not much concerned with the details of designs but ask firms to design, quote for and supply trusses, stagings and girders, etc., to their own designs and they use what they find cheapest and best. It is for Tata's to go round to the firms and find out what they are using and try and meet the demand."

Bombay, Baroda and Central India Railway.—

" I cannot trace the receipt in this office from any official source of any list of sections rolled by Messrs. Tatas, but I recently obtained through Messrs. Jessop & Co., Calcutta, a list of these sections.

" The information given in this list is somewhat sktechy in that nothing is recorded with regard to the thickness of angles, etc. I am however giving instructions that designs should as far as possible be prepared so that the Tata sections can be used on the assumption that all thicknesses as per British standard list are rolled by Messrs. Tatas."

Bikaner State Railway.—

" When asking for quotations for steel work we do not specify source of manufacture of sections; and for bridge spans we always use spans to the standard drawings published by the Railway Board. I have been unable to trace the enquiry quoted by Tatas on the list sent by you and imagine that they have been given incorrect information."

Bengal Nagpur Railway.—

" As far as we are concerned there is one work. Foot bridge at Bhatpara. There are 4 sections mentioned as specified by us which they do not roll L. S. (1) $6'' \times 3\frac{1}{2}''$, (2) $4'' \times 3''$, (3) $6'' \times 3''$ and (4) $3\frac{1}{2}'' \times 3\frac{1}{2}''$.

" As regards (1) and (3), Tatas are wrong, these are not specified as L. S. sections but angle cleats—they were meant to be made of bent plates.

" Item (2) L. S. $4'' \times 3''$. There is a total of 18′ of this section in the whole order.

" All our contractors know that they are not absolutely tied to the sections mentioned in our designs and we have had frequent requests from them to let them use alternative sections and this request is invariably sanctioned. In this case if the successful tenderer had asked permission to use $5'' \times 3''$, it would have been granted.

' As regards item (4) L. S. $3\frac{1}{2}'' \times 3\frac{1}{2}''$. I see from the list that everybody has asked for it. This is one of the commonest sections in use and it is up to the Tata Iron and Steel Company to roll it or go without orders for it.

" Among their other complaints are—

(1) that H. S. beams $20'' \times 7\frac{1}{2}''$ are specified and they do not roll any as heavy. These are required for 12' girder spans—to use Tata sections would mean expensive plate girders.

(2) Heavy column sections are required and they do not roll any. In place of $6'' \times 5''$ they offer $6'' \times 3''$ and in place of $12'' \times 8''$ they offer $12'' \times 6''$. The man who made out the list evidently did not understand what he was talking about. In effect they are asking us to use expensive lattice braced columns in place of simple rolled sections.

" The crux of the matter lies in the penultimate paragraph of Tata's letter.

" We have done all we can to bring our section lists to the notice of Railways.

" There is no such list in our office, the head of our stores Section cannot remember ever having received one. I have a dim idea that I got one some time before 1914, but I have never had one since and the old list must have been mislaid long ago.

" The C. O. S. gets regularly, not a list of sections which Tata roll, but a list of what they have in stock. This is not very helpful from a designer's point of view, as we cannot alter our designs from month to month. A study of these monthly stock lists is very interesting. I have gone through the lists for this year and except for a few sections, chiefly L. S. $6'' \times 6''$ of various thickness, a size we hardly ever use, they are all labelled ' 2nd class,' ' untrue to section,' ' untested,' ' rusty,' ' bazar ' and in many cases ' 2nd class rusty.' In other words material which we cannot use. I was informed by the C. O. S. office that enquiries have been sent to Tatas at various times and in the great majority of cases they have not been able to supply in a reasonable time.

" I have on several occasions, although not in the last two years, brought up the question of the use of Tata sections with representatives of different Calcutta firms in private conversation. I have been informed that though they are willing to use them if they have them in stock, they dare not quote for Tata sections where there is a time limit on the contract as they cannot rely on quick delivery from the makers. The impression I have gathered is that Tatas rely on State contracts for the bulk of their profits and supply the general market when they have a spare mill or so."

Jodhpur Railway.—

" To the best of my knowledge this Railway has never been supplied with a list of the sections rolled by Tatas.

" With particular reference to the foot-bridge in question, the design was made by the contractor whose tender was accepted.

" I have no objection whatever to the incorporation of sections rolled by Tatas in any design."

North Western Railway.—

" The practice in this department is to use, in designing, these sections which are considered most suitable and economical. After completion of any designs tenders for the supply of all the sections required are called for and if any of the sections cannot be obtained within a reasonable time, then the most suitable section offered is accepted.

" Even when sections are not in stock, they can frequently be obtained from England in a shorter time than is required for Tatas to supply sections rolled by them. The case of some $10'' \times \frac{3}{4}''$ steel bars, for which tenders were recently called will serve as an illustration of this. Several firms tendered for British steel to be supplied within six to eight weeks of receipt of order, while Tatas promised delivery in August and September. The order was placed with them on 16th July and they afterwards wrote to say delivery would be made in September and October, *i.e.*, between 6 and 15 weeks from the date of placing the order.

"The number of sections rolled by Tatas is so small that in most cases it is quite impossible to select a suitable one. For instance, of unequal angles of sizes suitable for structural works (3″×2″ and upwards) only four are rolled, out of a total of seventeen which are British Standard Sections. Other sections are equally deficient and some such as bulb angles and the new heavy beams now being rolled by English mills, are entirely absent from Tata's list.

"Frequently no tender is received from Tatas for sections which are rolled by them.

"The statement that 'some of the sections asked for are so unusual, etc.,' is not understood, unless it refers to some of the material required by other railways. Without a single exception the sections shown as asked for by this railway are British standards, which can be obtained from any large English Firm, usually from stock, and at no extra cost.

"Finally I wish to add that I take exception to the suggestion made that sections which are not rolled in India are purposely employed in designs prepared by this Department. Such conduct would be considered unprofessional by any reputable engineer, and I am surprised that such an allegation should have been made by a representative of Messrs. Tatas concerning engineers of this or any other Indian State Railway."

RAILWAY BOARD.

B.—ORAL.

XIV.—Evidence of Sir CLEMENT D. M. HINDLEY, Mr. A. A. L. PARSONS, and Mr. J. M. D. WRENCH, recorded at Calcutta on Monday, the 26th July 1926.

Rails and Fishplates.

President.—As regards questions 1 and 2, you have not given us any answers, but I take it that as regards the purchase of rails, the Railway Board make the necessary arrangements with the Tata Iron and Steel Company.

Sir Clement.—We have a contract with Tata's for the State-managed Railways which we have explained in our letter and the quantities required each year are notified by the different railways to Tata's. But it is hardly correct to say that the Railway Board purchase the rails.

President.—I say that you arrange for the contract practically on behalf of the State Railways.

Sir Clement.—Yes, on behalf of the State Railways.

President.—Since we first enquired, the Great Indian Peninsula Railway and the East Indian Railway have come under State management.

Sir Clement.—That is right.

President.—What I want to be clear about is whether you have purchased any other rails on behalf of State Railways than Tata's.

Sir Clement.—That is right. We say in answer to question 4, " No continental rails or fishplates have been purchased by the Railway Board on behalf of the State-worked railways."

Mr. Mather.—It does not say anything about British rails.

Sir Clement.—As far as I know, no rails have been bought by State-worked railways except in India.

Mr. Mather.—During the last two or three years?

Sir Clement.—Yes.

Mr. Mather.—In the early stages of the operation of this contract, there were one or two occasions in which the State-worked railways were not able to get their full requirements and on that account there were one or two purchases in England.

Sir Clement.—The Great Indian Peninsula Railway and the East Indian Railway certainly bought them before they came under State management. But I cannot recollect any individual case of any other State Railway buying British rails.

President.—As regards question 2 regarding the probable consumption of rails and fishplates, we have not got any estimates so far, and it is very difficult for the Board to know what the demand is really going to be. Of course we realise that it cannot be easy for anybody to make a definite estimate, but we should like to have some estimate.

Sir Clement.—For what period do you want one?

President.—It would do if you could give an estimate for 5 years.

Sir Clement.—I don't think that we could give you any figures that would be worth relying on. We do not know what our programme is going to be. Our programme varies from year to year to some extent. Therefore we cannot make an estimate.

President.—Make an estimate taking the life of rails as 40 years as regards renewals. I think you gave us some figure last time on those lines.

Sir Clement.—The difficulty is this, that when once we give estimates they are always looked upon as actuals, and we are considered to have broken our contract if we don't purchase the amount mentioned in the estimates.

President.—We can try and safeguard you against that.

Sir Clement.—I doubt if you can.

Mr. Parsons.—The difficulty in safeguarding us would come in if we made an estimate now and you based your proposals on it, and we did not actually purchase that amount afterwards.

President.—The question arises in this way. If protection is continued and if it takes the form of bounties, then the Government expect us to give them an estimate of what it is going to cost them. For that reason it is necessary to have an estimate of your consumption of rails and fishplates. Secondly, we have got to consider what is going to be the demand in order that the industry may expand. The claim of the Tata Company is that it can manufacture 200,000 tons. If we feel that your demand is going to be well within that, we should be justified in saying that for another Steel Works there would not be much scope in that direction.

Dr. Matthai.—What is the main uncertain factor? Is it not extensions?

Sir Clement.—Extensions and the rate of renewals. For a period of five years it is not safe to take the estimated normal life of rails as 40 years. Our rails were put in different periods, so the renewals would be at different times.

Dr. Matthai.—Would you be very wide of the mark if you made some kind of estimates on your past experience?

Sir Clement.—We might not be very wide of the mark.

Dr. Matthai.—If the really uncertain factor was extensions, supposing you ruled out extensions and said on the present basis your requirements would be so much, would that not be a safe estimate?

Sir Clement.—It would be very objectionable to be tied down to a figure.

Mr. Mather.—You have two causes operating which I understand give rise to the necessity for renewals, one being the actual wear of the rails and another being that if you increase your load or speed on a certain track, rails which would otherwise continue to be satisfactory for some time are no longer sufficient under the changed circumstances. The latter I think is the cause of a fair proportion of the relaying programme. The point is whether there is likely to be any considerable increase in traffic speeds or axle-loads.

Sir Clement.—The whole thing is in the transitional stage. Year after year new factors come up which have to be taken into account regarding relaying for the purpose of improving the track. For instance, we might make up a programme as suggested by Dr. Matthai based on our previous experience but in the meantime we might be considering the wholesale renewal of a particular track in order to bring it up to a higher standard. Our position with regard to that is that we are only just coming to a scientific examination of the question of the standard of the track and I should therefore hesitate very much to say what the development would be in that direction for the next few years. We have many uncertain factors coming up for consideration that will alter our calculations about renewals. There are things like the coal traffic. If a large export coal traffic springs up, we might have to improve the whole track from the coalfields to Calcutta in order to carry it. Unknown factors are very great at the present time. For that reason we do not like to give any figures which may be misleading.

President.—If Government do not want us to work out the costs in the case of bounty, we don't mind, but when they say that the Tariff Board, if it recommends a bounty, must work out what it is going to cost and point out where the money is going to come from, it is a different business. Ultimately you would have to check our figures, supposing we make an estimate.

Sir Clement.—Supposing we give you an estimate, you base your scheme, on that and we cannot work up to it, Tata's will come along and say "We don't get the benefit which we expected. Give us more bounty."

President.—Perhaps you might give us your actuals from 1922-23. If you like to say on those figures that it would be safe to take such and such a figure, we should be glad. If not, we have got to give some estimate. We cannot say that we cannot give an estimate, because the Government of India expect us to do it.

Sir Clement.—We have got them from the railways, I think.

President.—We find it very difficult really to understand what it exactly comes to. If you could give us the actuals for the last three years—simply rails and fishplates—and then give us an estimate based on that, it would be useful.

Mr. Mather.—Could you go so far as to say that at present you see no factor which is likely to reduce the demand within the next few years as compared with the last few years?

Sir Clement.—It is all so linked up with the question of finance. There is a limit to the amount we can borrow. You want us to give you the actuals for the last three years?

President.—And any other data on which we can base an estimate.

Sir Clement.—Do you want this for the State-managed railways or for all railways? The railways themselves have given you some figures.

President.—Some have given very good figures and some have not.

Sir Clement.—These figures that the railways have given you have evidently been taken from their own programme which may not have been approved by us, so that they may be rather uncertain.

President.—That is possible. Then as regards these prices that you have given, are these the original prices? Did you not revise Tata's rates?

Sir Clement.—These are the rates in the contract to which we reverted from 1st April 1924 after having made certain concessions in price during the first three years in the absence of a protection policy.

Dr. Matthai.—Concessional rates had been applied only for two years?

Sir Clement.—Concessional rates came from 1920 and we brought the prices up to the British price in 1922-23, I think.

President.—As regards the use of Continental steel rails I find that it is only recently that some railways have been using them. Have the Railway Board any information as to how these rails are doing?

Sir Clement.—I don't think we can give you any information about that. Of course these rails are made on the same specification and put through the same tests as the British rails or Tata's rails.

Mr. Mather.—Generally speaking it is so. They are made to specification. In fact there are certain tests which are more stringent than British tests. The Bengal Nagpur Railway purchased some Continental rails in 1924-25.

Sir Clement.—Are they basic steel rails?

Mr. Mather.—Yes. The specification provides for either Acid Bessemer or Basic Open Hearth.

Mr. Wrench.—What is the extra test?

Mr. Mather.—In addition to the usual drop test there is a static deflection test which is not included in the British specification.

Sir Clement.—That specification was probably drawn up by Messrs. Wolfe Barry and Company.

Mr. Mather.—No name is given on it.

Sir Clement.—Presumably this was introduced because of the different method of manufacturing steel.

President.—I think this is rather a new complication that has come in—these Continental rails. These may disappear if the new rail combine comes into being, but I should like to know whether the Railway Board has any policy as regards the use of Continental rails?

Sir Clement.—If they come to us according to specification we have no objection to Continental steel.

President.—If it is not going to be a very important factor it would be hardly worth while to discuss the matter at any great length. In the previous enquiry we ignored the competition from the Continent so far as rails were concerned, but during the supplementary enquiry Continental rails came more into prominence.

Sir Clement.—It is entirely a question of the future trend of Continental prices. We cannot suggest anything about it. We have no wish to exclude Continental rails.

Dr. Matthai.—It is really a question of quality and price so far as you are concerned, is it not?

Sir Clement.—That is so.

President.—As regards your own railways has there been any sort of complaint about Tata's rails?

Sir Clement.—No serious complaint. I don't think we have had any complaint really from State railways, not such as is based on any definite information. Our people say they have not got sufficient experience of Tata's rails to say whether they will give the same service as the British rails. That is all we can say.

President.—In one or two cases we have received complaints and we shall enquire into them when we go to Jamshedpur.

Mr. Mather.—About 1920-21 the Great Indian Peninsula Railway reported to me, when I was Metallurgical Inspector, the results of their examination of some Tata rails which had been laid side by side with British rails for four or five years. The result was that the wear was practically the same. Would it be possible for you to ascertain, now that the Great Indian Peninsula Railway is a State railway, whether they have had a recent opportunity of re-examining that batch of rails, and, if so, what was the result of their examination?

Sir Clement.—Yes, we will enquire and let you know.

Mr. Wrench.—Did they report to you direct at Jamshedpur?

Mr. Mather.—Yes.

President.—As regards question 7, you say that you are not aware of the conditions in which it was suggested that a bounty might fail to enable the steel industry to secure the prices for rails contemplated by the scheme of protection. Well, we had this in our mind at that time. We had received a representation from the Tata Iron and Steel Company in which they said that they had failed to secure the full amount of the bounty because one or two of the Palmer Railways had not taken their rails. As the bounty was on the production of rails they produced less rails, and the loss, they stated amounted to Rs. 8 lakhs. That is the sort of thing we had in mind.

Sir Clement.—I should like to take up two points in their representation about rail orders. They talk of having lost that bounty. The actual orders placed with Tatas were not very far short of their total output, and if they had got orders for the whole of the railway requirements they would not have been able to turn them all out. They have omitted in fact to mention that the orders they did get owing to some of the railways having increased their tonnage nearly filled the whole of their output. That is one point.

President.—I am glad you mention that because they have made much of it. In paragraph 21 of their representation they say they suffered a loss of Rs. 8 lakhs.

Sir Clement.—It would be quite possible for you to discover if that is correct by finding out the total tonnage of rails ordered from them as compared with what they said their total output would be. As far as I remember the tonnage ordered was within a few thousand tons of the total estimated output. That was due to our having increased our orders for one of the State railways, and also to one of the company-managed railways, the Nizam's Guaranteed State Railway, having increased their orders.

Mr. Mather.—In so far as you have increased your orders, that is distinctly to the benefit of the Tata Iron and Steel Company as they get a better price for their product.

President.—What control has the Railway Board got over these company-managed railways? The Tata Iron and Steel Company states that the Railway Board did their best to assist it to get orders from one of the Palmer Group of railways.

Sir Clement.—I should like to know what their specific complaint was to enable me to answer to that.

President.—Their complaint is contained in their representation regarding rail orders for the Palmer railways. They say they made this offer.

Sir Clement.—The assistance that was given on this occasion was to endeavour to pool the requirements of all the railways and to come to an agreement with the Tata Iron and Steel Company for a price for the whole amount. Certain of the company railways wished to call for simultaneous tenders and in the end they did so because they were not satisfied with the Tata price. That is the position.

President.—They say they went down as low as Rs. 105?

Sir Clement.—That was not sufficient to satisfy the companies because they could get rails cheaper elsewhere. If I may say so, the whole trend of the memorandum is somewhat offensive because they assume throughout that they are entitled to get all orders, and look upon us as responsible for getting them the market. I don't think the Tariff Board would support a view of that sort.

President.—They quoted Rs. 100 to the Burma Railways but that offer was also rejected.

Sir Clement.—The Burma Railways were able to get them still cheaper and Tatas could not compete at that price. I would like to point out that on page 35 of their representation the Tata Iron and Steel Company say: "Simultaneous tenders have not been called for nor have the railways concerned made any effort to assist us in this matter", and on page 34 they say they tendered as low as Rs. 100 per ton for the Burma Railways. How did they quote if no simultaneous tenders were called for? These two statements are conflicting.

Mr. Mather.—It is possible that they heard of the call for tenders in Europe which presumably was advertised.

Sir Clement.—They have got their office in London.

Mr. Mather.—That is not exactly the same thing as calling for simultaneous tenders.

Mr. Parsons.—They are probably verbally correct as regards that statement, but they were in a perfectly good position to tender.

Dr. Matthai.—Apart from that question the real difficulty is that the bounty on rails is not earned by the Indian Steel Industry unless the rail is made and sold. Supposing the circumstances are such that they are not able to sell the rails, as far as we are concerned the protective scheme on rails becomes ineffective and therefore the Tariff Board has got to take that into account.

Sir Clement.—If you find that in fact they got orders very nearly to cover their total output, you are off your ground.

Dr. Matthai.—If we consider that there is a reasonable possibility of the difficulty arising in future, then the whole question must be taken into account.

Sir Clement.—Yes.

President.—The point arises in this way. If any railway is able to get its rails at a price very much below the price that the Tariff Board rightly or wrongly considers a fair selling price, then to that extent the scheme of protection has failed.

Mr. Parsons.—That is, the bounty, which is merely an aid to enable them to quote a finer price, has not been fixed at the right figure.

President.—Or the duty is not high enough.

Mr. Parsons.—In this case it happens to be a bounty.

President.—If it is a fact that some of the railways do get their rails cheaper than under the scheme from Tatas, that scheme to that extent defective.

Sir Clement.—My objection to this is that they have assumed that in addition to the bounty which the Tariff Board has arranged with the Government to give they ought to be shown some kind of benevolence. That is the objection I have to that statement of theirs. They conceal the fact that they had orders practically up to their total output.

President.—I think it is a good point. We should go into it.

Mr. Parsons.—It seems to me that this bounty is merely meant to be an aid to the company to quote a fine price, leaving them if they don't quote fine enough, to take the risk of losing the order and losing the bounty. In their representation they appear to claim that in addition to getting the bounty they should not take the risk.

President.—The bounty was given to enable them in conjunction with the duty to obtain what we considered a fair selling price. At that time we thought that Rs. 180 was a fair price if their costs were on an average Rs. 130, that is to say, they were to get about Rs. 50 above their works cost. If they have to sell rails at a price which does not enable them to get Rs. 50 above their works cost, then protection has become inadequate. That is the point. Whether it is a bounty or a duty, the scheme contemplates that they shall get a certain price and if they don't get it that scheme has failed and they mention this as an instance, but Sir Clement has pointed out that they have not told us all the facts.

Sir Clement.—May I ask one point which rather concerns you. You notice that railways have placed orders outside. They are people who are situated further away from Tatanagar. Is it intended that the protection you give to these people is to be such as to enable them to compete successfully in all parts of India? I thought I had better mention this.

President.—It cuts both ways. If in order to secure the southern market they were to sell their rails at a lower price, they must get a higher price for the other rails, or the total amount of protection would be smaller or less. We worked rather on this basis that the industry ought to earn a certain amount. If the industry doesn't earn enough in some part, it has got to earn more in another part. It would not be right to raise the price of rails all over India in order that some small section of the market should benefit.

Sir Clement.—The alternative seems to me to put Tatas in the position of absolute monopolists. If you designed your scheme to cover these factors as well, it would then give Tatas a complete command, without any competition at all, of the Indian market, their only customers being practically railways. It is a matter for you to consider, but I think I had better mention it.

President.—That is the position at present. There is only one firm. If the scheme succeeds then another firm or two might come in and then there might be competition. So long as the industry doesn't expand, that factor remains an inevitable evil.

Sir Clement.—There is the danger of losing anything like the price-regulator.

President.—We shall mention in a moment what can be done and what we are considering.

Sir Clement.—It is a matter which has been mentioned by the Madras and Southern Mahratta Railway which points out that they have been penalised by their geographical position. It doesn't penalise the railways so much as the people in that area.

President.—That question has come up before us more than once. Take the case of Karachi for instance. They are at a greater disadvantage. Take the case of Burma. We have not got the power to make any proposals for any differential tariffs for different parts of the country. We may have to make some adjustment by which they get an average price which would give them the amount of protection that we recommend as reasonable.

Mr. Parsons.—That is to say the East Indian Railway must pay more in order that the Madras and Southern Mahratta Railway may pay less.

Mr. Mather.—There are two things which it is impossible to reconcile. You cannot at the same time have Tatas receiving a uniform f.o.r. price for rails and the railways paying a uniform price for the rails delivered to them. Both these things cannot be reconciled where the distances from the steel works are so different.

President.—We have been considering the question of freight as between the Southern Mahratta Railway and the East Indian Railway. So far as the Madras and Southern Mahratta Railways are concerned, they come up as far as Waltair.

Sir Clement.—Yes.

President.—After that they will carry the stuff on their own line.

Sir Clement.—Yes.

President.—Between Waltair and Tatanagar I take it is the question of the additional freight.

Sir Clement.—The freight is to the point where the rail is going to be actually used.

President.—That is not peculiar to the Madras and Southern Mahratta Railway. That applies to all the railways.

Sir Clement.—It costs the same to carry for themselves or for others.

President.—In the case of the East Indian Railway they have to carry to Allahabad or anywhere else. They are more or less on the same level. The only extra freight that the Madras and Southern Mahratta Railway will have to pay is from Tatanagar to their terminus on this side.

Sir Clement.—The rail freight that they have to pay is from Tatanagar to wherever they are using the rails whether it is over a foreign railway or whether it is on their line. You cannot wipe that out.

President.—We should be very glad to have your advice on that point. If you exclude the rails for which there is a market in Southern India, we have got to make some sort of adjustment in order to enable the industry to get an average price. That is the position.

Sir Clement.—It seems to me if you go too far in designing your scheme to meet every point in India that it would put Tatas in a very strong position. This is my opinion only and this is not necessarily the opinion of Government. I don't see why you should eliminate every possible factor of competition. Tatas know perfectly well that if they are trying to get the South Indian market they have got to quote a fine price. They quoted the same price. They simply said Rs. 105.

Dr. Matthai.—I quite agree with you. But, supposing there is a very considerable amount of unfair competition and foreign manufacturers are not selling here at an economical price, then won't you agree that it ought to be treated on a different footing?

Sir Clement.—That raises a different point altogether. In this particular case can it be called a dumping price? Tatas have made a great point about that. I don't think they have got any evidence really to that effect. They have not produced any evidence here.

President.—The price was said to be about £6-8-0. That is lower than any we have come across.

Sir Clement.—All prices in England are quoted very low. Tatas make a misstatement where they say the average price is £8. I think Mr. Mather will be able to bear me out.

Mr. Mather.—That price is not correct.

Sir Clement.—There is, as a matter of fact, a small margin between the price quoted here and the price at home.

President.—It is a long way between £6 and £8.

Dr. Matthai.—The usual margin is 10*s.* between internal and f.o.b. price.

Sir Clement.—That is the usual margin in the trade.

President.—Can the Railway Board compel any of the private railways to purchase an article manufactured in the country when it does not want it?

Sir Clement.—I believe we can compel them to do anything, but we have to consider the general position of these companies. Whether it would be politic or not for Government to compel them in certain directions is a matter of policy. No doubt Government have paramount power in all these things, but it is a very serious question from the point of view of policy. You ask the Company railways to work economically and efficiently, and then if you begin to dictate to them where they ought to buy their things and how they are to do their work, you come to an end of the contract; in fact the spirit of the contract is broken.

President.—That is true. What I am considering is this: in so far as it may be necessary for the Government to carry out their own policy, to that extent could the Railway Board put pressure on the Company-managed railways?

Sir Clement.—Company-managed railways are bound by the principles underlying the Stores Purchase rules. There is no question about that, but when it comes to putting pressure on them to give the orders to Tatas at a higher price, I don't think we would be justified in doing so.

President.—When Government accept the policy of protection they must naturally make it effective. When it is found that some Company doesn't carry out the object of the Government, would it be unnatural for the Government to say to that railway "you are not doing your best to give effect to our policy?"

Sir Clement.—We should be getting into serious difficulties with the Companies and the Secretary of State too if we forced the Companies to pay more for Tatas rails instead of buying them elsewhere. It would be against the spirit of the contract to do so.

President.—It may then be necessary for the Government who are responsible for the policy of protection, to adopt measures by which their policy is made effective. Government may have no alternative . . . . .

Sir Clement.—But to make the Companies pay more?

President.—They won't do that necessarily. Government may say they will put a larger duty on rails if their policy is being made ineffective. I am putting the case from the point of view of Government, on the assumptions that they have decided on a policy of protection and that they desired that it should be made effective.

Sir Clement.—That will have to be decided by the Government of India. I am not in a position to give an opinion on that. The Companies have got their contracts. They are not scraps of paper. You have got to honour them.

Mr. Mather.—We have a reply from the Madras and Southern Mahratta Railway in connection with the wagon questionnaire which has some bearing on this point. The question is: "Please state to what extent your requirements as to wagons and underframes are obtained through the Railway Board?" The Madras and Southern Mahratta Railway replies to us: "We are entirely under the Railway Board's control." Is that something of an exaggeration?

Mr. Parsons.—The statement is not definitely correct. We get the tenders and put before them what the results of the tenders are. Then they take the orders of their Board of Directors on them.

Mr. Mather.—They rather exaggerate the extent of your control?

Mr. Parsons.—Yes.

Dr. Matthai.—Your position comes to this. With regard to Company-managed railways Government have got to treat them exactly as it would treat any other consumer.

Sir Clement.—That I say would be the position of the Government of India at present.

Mr. Parsons.—I think if the quotation from home is a lower price than the price quoted by Tatas, and if they are compelled to buy from Tatas, they would be running the railway uneconomically and therefore not efficiently. Then they would probably have a very good legal case under most of the existing contracts.

President.—The whole thing depends on what the view of the Government may be. If the Government came to the conclusion that rails, for instance, ought to be protected in the country, then it would be for Government to take such measures as they considered necessary.

Sir Clement.—If I may suggest it to the Tariff Board, Tata's are aiming at producing an effect on your mind altogether disproportionate to the real point at issue. They are weighting certain facts which have occurred, and which to my mind are not entirely relevant, with the definite object of producing in your mind the idea that the Company Railways have in some way endeavoured to get out of this policy of protection. The total amounts involved are inconsiderable when the total output of Tata's is concerned. They have altogether overweighted the case with regard to those facts. There is no attempt on the part of the Company Railways to get away from buying Tata's rails. If they can buy them here, there is no need to buy them in England. But they were on a prefectly sound business footing in my opinion in going to the cheapest market and getting the lowest satisfactory price. I am not saying anything about the future. I am only speaking about this particular case. I want also to draw your attention to this. On page 35 they say "For the first time we have had serious complaints as to the quality of our rails." That I don't think is correct. I believe that there has been one complaint from the Madras and Southern Mahratta Railway about the wearing quality of their rails. That this is the sole complaint I am not in a position to say exactly, but I do not know of any other serious complaint. There has been no complaint from the State-worked railways. Then they say that "we are informed that the latest specification issued by the Consulting Engineers, Messrs. Rendel Palmer and Tritton, definitely states that rails made by the Basic Bessemer Process will not be considered." There is no truth in that whatever.

President.—I think they have abandoned that attitude.

Sir Clement.—They say that the object of this is to exclude rails of Indian manufacture as the Basic Bessemer Process is not used in England. Is their process Basic Bessemer Process? It is not.

President.—Their expert at any rate did not think that if this was the specification, it would exclude their rails.

Sir Clement.—You have passed this memorandum on to the Company Railways and have asked them to answer you. You have also asked whether

you might be able to interview representatives of the Consulting Engineers. You will not be able to do so, because they have not got any in this country but I do think in the face of this deliberate misrepresentation it is due to the Consulting Engineers and the Company Railways to get Tata's to make some public withdrawal of that statement.

President.—They have done it in the evidence. You will see it when it is printed.

Sir Clement.—Tata's have endeavoured to put you in a very awkward position. You might tell the Company Railways that this allegation has been withdrawn.

President.—As regards the question of their ability to dispose of the whole of their rail output it comes to this that either some companies should pay more for their rails, or that other forms of steel products should bear a higher duty in order to enable them to make up what they might lose on rails.

Sir Clement.—Adding together the orders which have been placed against 171,000 tons which they mention on page 33, my recollection is that they come to something over 160,000 tons.

President.—The last time we had to go on the then price of rails and the cost of the Tata Iron and Steel Company. The position has very much changed. Their works costs have come down as far as rails are concerned by about Rs. 35. The position is somewhat like this. If they could find a market for the bulk of their rails in the country and if we took to-day's British prices, then either the present duty or a little more might suffice. We cannot tell at present what the figure is going to be. For instance in April last the works costs of rails were Rs. 83, and if our former recommendation stood they would be entitled to get Rs. 57 above that. You have got there the figure of Rs. 140 against Rs. 180 on the last occasion.

Sir Clement.—Do you mean to say that if they got Rs. 140 they would be in the same position in which the Tariff Board thought of putting them with Rs. 180?

President.—They said that their costs would go up in the latter months by a rupee or two. As a matter of fact their costs are showing a tendency to come down. They want a duty of Rs. 10 a ton in addition to what they have got to bring their price to Rs. 154. They reckon their average cost at Rs. 100. Supposing a duty was put on and at the same time a price was fixed, do you think it would meet in practice with the approval of the Railway Board? Their present figure is Rs. 140. They expect to work down to Rs. 125 in a certain number of years. Supposing we thought it might take them some years to come down to that figure and we took an intermediate figure say between Rs. 125 and Rs. 140 and said that that was the price and that it should not go above that, the duty should be high enough to enable them to get that price.

Mr. Parsons.—Your suggestion, if I understand it rightly, is that it should be laid down in some form—I don't know whether by legal provision or otherwise—that they should not charge the Indian Railways more than Rs. 130 per ton, or something like that, and at the same time you would put on any duty up to 1,000 per cent. in order to force the railways to buy their rails from Tata's at Rs. 130 a ton. Is that not roughly your proposal?

President.—Take the case of the United Steel Corporation. They fix a price which has nothing to do with costs.

Sir Clement.—That is not a price fixed by Statute.

President.—Instead of the manufacturers fixing the price the Statute fixes it. Supposing we put a duty on and supposing we fixed the price, they would not be able to put up the price against the Railway Companies. Supposing, again we did not fix the price at Rs. 130 and put a duty of Rs. 40 a ton, and the world price went up to Rs. 150, ordinarily they could claim from you Rs. 190. Instead of that, if we fixed a price they would claim the

price we fixed as reasonable. On the other hand if there was a little drop, then the railways would have to pay a little more.

Mr. Parsons.—Supposing there was a drop in the world price, it would be to our advantage to buy from abroad in spite of the duty.

President.—We must assume for the sake of argument that the scheme of protection aims at providing against it.

Mr. Parsons.—You will put on the duty so high that it will be practically impossible for a foreign product to jump over it?

President.—The duty may have to vary. There was a provision in our last Report for putting on off-setting duty if the prices dropped and if the scheme of protection failed for that reason.

Mr. Parsons.—It comes to this that, assuming that Tata's could produce the whole of our requirements, the effect would be just the same as a definite order from Government, that would be binding on us to buy from the Company for a period of years.

Dr. Matthai.—It assumes an absolute prohibition of imports.

Mr. Parsons.—That is the effect of it, whatever elaboration you may put on it.

President.—It is not more than the scheme of protection contemplates.

Mr. Parsons.—As regards the scheme of protection, it depends on you and the Government of India. In the existing scheme of protection, it is not contemplated that all rails should be stopped from entering the country. If you stop all the imports, there would be no inducement for Tata's to bring down their costs.

President.—The inducement is there to bring down their costs because if we adopt this method, it would not be this year's price, but a price which they will have to work down to. Supposing they required 140 now and Rs. 125 after 7 years, they would get some intermediate figure between the two.

Mr. Parsons.—You will give them Rs. 133?

Sir Clement.—It will come to the same thing as a long term contract.

President.—Except that there is no obligation on the part of the Railways to buy, but there is the obligation on the part of Tata's to sell at that price. It is rather different from a contract.

Mr. Parsons.—In practice if you put your duty so high that no foreign rails could come in, the effect would be this that though the railways might not be under a legal obligation to buy, they would have to pay practically what you settled as the price for that period. They might be bound to pay a very much higher price than they need in those years to meet their requirements.

President.—Unless we are satisfied that Tata's could meet the total requirements of the country, we might have to make some other provision. We are assuming just now that all the rails that the railways would require could be manufactured in the country by Tata's or by any other Steel Works that might come in.

Sir Clement.—Would they be compelled to supply at that price up to our full requirements?

President.—Certainly.

Sir Clement.—What is to prevent them, if they get a favourable market for other kinds of steel, from saying "Sorry, we cannot supply this month."

President.—They cannot have it both ways. The idea is that they ought to get a reasonable price.

Mr. Parsons.—It prevents us or any Company's railway from buying abroad, or from anyone else in India except Tata's. For example an estimate of 200,000 tons might be our average for five years, but we might want 100,000 tons in one year and 300,000 tons in another year. In that

case we should have to pay for the extra 100,000 tons that we could not get from Tata's a very much enhanced price.

President.—How would the Railways be better off if we did not make this arrangement? If a duty was put on, you would be exactly in the same position.

President.—In the last enquiry we did make proposals that if the protection became ineffective Government should increase the duty. Supposing that clause remains then how would you be better off by not having this provision?

Sir Clement.—It strikes me that if you enter into an arrangement of that sort you will probably be fixing a statutory price for a period of years, but at the end of that period would not the Government be placing themselves in exactly the same position as is the main cause of Tata's complaint? They say here that out of benevolence they entered into a contract with the company railways at Rs. 122-8-0 and that owing to a drop in the price of rails they suffered a loss of Rs. 82·10 lakhs. What is going to happen to your statutory price at the end of that period when the price has gone against them?

President.—I hope none of us will be here to contemplate that situation! We would like to have your advice on that point because you are the principal consumers of rails and it is very proper that we should have your views.

Mr. Parsons.—It means that under this scheme we have got to make a long term contract with Tatas for rails for five or six years, or whatever it may be, at a particular price based on an estimate which the Tariff Board has framed, and you yourselves consider that any estimate you might frame as to what price is really a reasonable price for Tatas to get for a period of years may be very largely falsified. They have come down in the last three or four years by Rs. 30 a ton. If the price rises, Tatas will be in the position they were in a year or two ago; if it falls they would be getting an undue profit. Your scheme would rest entirely on the firm's ability to make an accepted forecast as to what their costs are going to be for the next five years.

President.—I was just trying to suggest that you would be in no worse position. If the scheme contemplates that the amount of protection must remain the same at all stages then in that case you would not be paying a higher price.

Mr. Parsons.—If the Government of India were to accept a proposal for putting an absolutely prohibitive duty on the import of steel rails into this country, it might possibly be to our advantage to have a fixed contract with Tatas.

President—It is not a question of prohibitive duty but adequate duty. The duty is supposed to be just enough to protect the industry.

Sir Clement.—Prohibitive in the sense that a duty which is supposed to be just enough to protect the industry would prevent other rails from coming into the country.

President.—Protection is meant to do that.

Mr. Parsons.—In that case it does not make any difference to the Railway Board what the duty is.

President.—It is of importance in this way. Supposing we came to the conclusion that there is a chance of a rise in the world price; in that case if you put on a duty, the price of rails might go up more than was necessary to enable Tatas to get reasonable protection. It is against that that we want to provide.

Sir Clement.—In that case if it was a prohibitive duty, call it adequate duty if you will, it may be better for us to protect ourselves by a definite contract with Tatas at a particular price or a particular range of prices That is all I can say.

Mr. Parsons.—If you put on a duty which means that rails may go up so much in price that under no circumstances could we import them, then it may be desirable for us to protect ourselves against a possible rise in Tata's prices. I can't say more than that. We should have to think it over.

President.—I would like to have your views on this point.

Sir Clement.—As I understand it, the proposed method of protection intends definitely to divorce the whole business from European prices, that is to say, from the trend of world prices. You base your measure of protection entirely on the internal working of Tatas as shown by their figures; you divorce it entirely from any question of world prices.

President.—I feel that the chances in the future were, so far as rails were concerned, that there might be a rise. In that case if we fix our duty and that rise materialises, the railways may say "they have fixed a duty and Tatas are getting a higher price whereas they could have done with less." Of course if your view is that the chances are that prices will go down. . . . .

Sir Clement.—The only criticism I would like to make is that if you put the industry in such a position that it need not take cognizance of world prices I don't think, taking a long view of it, you are benefiting that industry.

President.—To the best of our ability we make an estimate of the world prices and we base our protection on that estimate. Their price is governed by world prices *plus* a certain amount of assistance.

Sir Clement.—If I may say so, it appears to me that you do intend so to devise the measure of your protection as to divorce the whole scheme from any relation to world price. The measure of your protection will be the cost price of Tatas *plus* what you consider to be a reasonable profit.

President.—In any scheme of protection what more can be done? You have to assume that certain factors will exist for a certain number of years and you base your calculations on that. We cannot do more than that. In fixing Tata's fair selling price we take into account the world factors to-day and then we make an estimate as to what the price is going to be. I was just trying to point out that if there was a rise in the world prices then Tatas price would rise to the full extent of the duty. In such a case it will not be to the advantage of the railways.

Sir Clement.—I see your point.

President.—So far as we have any evidence at present, and judging from the trade papers and other things, it appears that prices of rails have reached so low a level that there might be a rise.

Mr. Parsons.—Of course, if there is a rise in the world price, automatically the necessity for protection to the steel industry in this country diminishes. Under your scheme you might be continuing protection when the necessity for protection had entirely ceased.

President.—Until Government changed its policy it must remain.

Mr. Parsons.—I think steel prices have risen by about 30 shillings a ton or somewhere round about it. Supposing they rose by 60 shillings, on the prices you have given us no further protection would be necessary because in open competition Tatas would get the orders. Your scheme would mean that if you fix protection for a period of, say, five or six years, possibly alterations in price will before them make protection unnecessary.

President.—Protection does not operate in that sense. When world prices rise it becomes substantially ineffective. During the earlier enquiry there was such a big gap between foreign prices and what we thought Tata's fair selling price that protection had to be given by means of bounties. Supposing we now find that the gap is not very big, then it seems to me that this is a simpler way of doing it. We are of course simply considering these proposals now.

Sir Clement.—If you prohibit the import of rails what about protecting the railways if they come up to the Tariff Board for the protection of their industry?

President.—Would you like to give us your considered opinion on the proposal we have been discussing?

Sir Clement.—I am afraid we cannot express any definite opinion on the scheme you have suggested.

Mr. Parsons.—If that is the possible form of your recommendations, those recommendations will have to be considered by the Government of India in the Railway and Finance Departments.

President.—I would like to have the opinion of the Railway Board as consumer of rails.

Sir Clement.—As consumer of rails, I don't think we are concerned with the machinery of your particular scheme. Our feeling about this is that we want to get our rails as cheaply as possible. We are assured of the good quality of Tata's steel; if we are assured of not having to pay more for our Tata rails than we pay for imported rails, naturally the Tata Iron and Steel Company will get the whole of our orders. There is no question about that. But I don't think I can express the opinion of the Railway Board on that scheme. I may add that we are mainly concerned in the interest of the railways in this country in getting our railway materials as cheaply as possible. That is the great necessity of India at present.

President.—That is for the Government of India to consider. If Government wants to protect the industry then somebody has got to pay for it.

Sir Clement.—If you make the railways pay for it you are strangling your transportation.

President.—We have got to propose a scheme if the industry has to be protected. Then we have to consider the claim of the consumer. But there is no getting away from the fact that protection under certain conditions does increase the price of the protected article.

Sir Clement.—Our main view is that we should resist very strenuously any scheme of protection which would increase the cost of material to the railways. Beyond that we have no comments to make on the scheme.

Mr. Mathias.—Would there be any financial difficulty?

Mr. Parsons.—I cannot say whether there would be any financial difficulty; it would depend in my opinion on the condition of the general revenues at the time. There would in my personal opinion be no difficulty in devising a machinery for passing on the extra cost of the duty to the general taxpayer from the person using railways.

Dr. Matthai.—Is not this arrangement about the separation of railway and general revenues liable to revision? I was looking at it this way. Supposing as a result of any protective scheme that we might suggest an increased burden is going to be thrown upon your railways, it seems to me a fair proposition to put to the Legislative Assembly "you have put this burden on the railways and therefore the contribution that the railways make to the general revenues should be correspondingly reduced." Is it not a fair proposition?

Mr. Parsons.—This is in general terms the arrangement. We contribute to general revenues 1 per cent. of the capital cost of commercial railways, one-fifth of our profits from those railways after this charge has been met, and, if after this any sum we could otherwise put to reserve exceeds 3 crores, one-third of the excess over 3 crores. Now, any bounty or additional duty on railway material which you might propose would obviously throw a varying charge on our capital and revenues from year to year, a charge which will bear no relation to the percentage we pay on the capital cost of commercial railways or year in and year out to the one-fifth of surplus profits or to the surcharge on the amount which we can put to reserve. It would therefore be impossible to justify a specific reduction of our contribution in any of these three directions on the ground that this extra charge

has been imposed on us, because no comparison would be possible between that extra charge and any of the items which go to make up our contribution. On the other hand, if it were considered desirable that railways should be recouped for the extra charge by a payment from general revenues, it could, in my opinion, be managed in much the same way as the bounty on wagons is managed. There we pay the higher price for our wagons, and there is an adjustment of the extra cost between general and railway revenues. This adjustment has no connection with our contribution to general revenues, and I should myself deprecate raising at this stage any question of altering the contribution. I should prefer to see for several more years how we are getting on under the existing arrangements. This is, of course, merely my own opinion.

Mr. Mathias.—The arrangement will not stand in the way of any scheme itself.

Mr. Parsons.—The only thing I can say is that the existence of the arrangement might justify a claim on our part to be reimbursed in some way. I should not like to give any more definite opinion. We should have to consult the departments concerned.

President.—That brings me to the other letter which we wrote to you (page 425) where we asked you about the effect of the imposition of duty on railway finances and general revenues. The point that we had in mind was rather this. Supposing instead of the Government paying a bounty, a duty was put, from the point of view of the Government what would be the difference? On the one hand Government pay Rs. 80 lakhs by way of bounty. On the other hand they get something as contribution from the railways. Under this other scheme if the burden was to fall on the railways how much would the Government, as proprietor of railways, lose?

Mr. Parsons.—We gave you the figures.

President.—I find it rather difficult to follow them. The point is this. The burden amounts to Rs. 80 lakhs. Supposing Government instead of paying that in bounties, decide to put a duty, then that burden falls on the railways. Government will save Rs. 80 lakhs of bounty. How much would Government lose, as proprietor of railways on the other side?

Mr. Parsons.—I cannot give you any definite figures. The calculations are somewhat complicated. It depends entirely upon the distribution of the Rs. 80 lakhs between capital, revenue and the depreciation fund. I have given you figures in a particular case, and in that case Rs. 57 lakhs would be debitable to capital.

President.—What I wanted to know was: supposing instead of paying a bounty of Rs. 80 lakhs, Government said that this additional expenditure should be borne by railway finances, what difference would it make to the Government as proprietor of railways?

Mr. Parsons.—Rs. 57 lakhs would be debited to capital and Rs. 23 lakhs to depreciation.

President.—Government saves Rs. 80 lakhs. How much would the railways have to spend?

Mr. Parsons.—They would have to spend Rs. 80 lakhs, a little of which in the first year would be covered by a reduction in the surplus profits of the Companies. Government (on the general revenues side) would of course be saving Rs. 80 lakhs by not having to pay any bounties on rails. Part of that Rs. 80 lakhs would be borrowed and part of it obtained from the railway customer and the taxpayer. What proportion would be raised by way of loan and what proportion would be taken from the railway customer and the taxpayer depend entirely on the circumstances of each individual year.

President.—On one side it would save Rs. 80 lakhs, but on the other side instead of paying Rs. 80 lakhs, it would spread it over so many years.

Sir Clement.—It depends on whether we are doing more capital work or depreciation work.

President.—I am not in touch with railway matters, but it seems to me that it would only affect the Government share and the companies' share of the surplus profits.

Mr. Parsons.—You have got to pay the Rs. 80 lakhs somehow or other.

President.—Would the whole of the burden fall on Government?

Mr. Parsons.—No.

President.—It would be shared partly by the company railways and partly by Government.

Mr. Parsons.—What it really comes to is this. To the extent to which there were still imports of rails from abroad, Government would of course recover (on the general revenue side) a certain amount by way of extra customs duty. Leaving out of account any increase in Customs receipts, under your scheme the extra Rs. 80 lakhs would in future go to Tatas by way of a higher price. Part of this 80 lakhs would be raised by borrowing, and the annual charges of the loan would have to be met. The rest would be taken from the depreciation fund, to which a larger annual appropriation from revenue would have to be made in future. In the initial year a small proportion (between 3 per cent. and 4 per cent.) of the extra price paid to Tatas would be obtained from a reduction in the Companies' railways' shares of surplus profits: in subsequent years this reduction would be negligible. The balance of the annual charge would fall on Government, who would have to obtain the money to meet it chiefly from the railway customer but to a certain extent from the general taxpayer, since the surplus profits of railways in which he shares would be reduced.

President.—Generally speaking it would make no difference to the Government whether it pays a bounty of Rs. 80 lakhs or whether it spends Rs. 80 lakhs.

Mr. Parsons.—It depends entirely on the articles you are using.

President.—We are talking of rails now.

Mr. Parsons.—It depends entirely on whether we imported rails.

Dr. Matthai.—The bulk of this expenditure of Rs. 80 lakhs would fall upon Government, but how much of that would be capital expenditure and how much revenue expenditure?

Mr. Parsons.—We can't tell you. It would depend entirely on our programme of work in each particular year. We have given you the figures for one particular year, but I am afraid it cannot be assumed that they can be applied with any accuracy to other years.

Dr. Matthai.—Would it be right to suggest that roughly the difference between the revenue expenditure and capital expenditure is the difference between renewals and extensions?

Mr. Parsons.—I am afraid not. If you wish to go into that question, at present we charge to capital the additional cost of replacing anything. In the estimates which we have given I have taken the extra cost to us of any enhancement in the duty as a charge to capital, assuming that anything we replace this year will not be replaced at a lower price than it originally cost us and that consequently any increase in price owing to any recommendations the Tariff Board may make will fall on capital. That is why at the moment, of this Rs. 80 lakhs as much as Rs. 57 lakhs goes on to capital and on State-managed railways nothing against depreciation account. But it would not be safe to assume that this will be true over a period of years, nor is our new capital expenditure confined to extensions. A large part of it is on open lines.

President.—It may be more or less safe for us to assume that the whole of that amount would be transferred from one department of Government to another.

Mr. Parsons.—If you were making a recommendation which in effect prevented us from importing rails, then there is no doubt that practically all the Rs. 80 lakhs which would go to Tatas would be paid by Government.

President.—Eventually it would come to Rs. 80 lakhs and major part of that would be borne by another department of Government.

Sir Clement.—Yes, but it directly affects the cost of transportation.

President.—This figure is given to us by the Tata Iron and Steel Company. It is clearly a hypothetical figure.

Mr. Parsons.—I gave you estimates on that figure. I am afraid I cannot give you more definite figures.

President.—Apart from the burden on the State-managed railways could you give me some idea as to what it would mean on the Company-managed railways?

Mr. Parsons.—In the two estimates I have given you I have worked out the figures for the Companies' railways as a whole. Rs. 7,000 would be the permanent annual reduction of their share of surplus profits, but in the first year their surplus profits would be reduced by about Rs. 2,30,000.

President.—How does that come about in the first year?

Sir Clement.—They pay 23 lakhs more for their rails.

Mr. Parsons.—I have put the depreciation figure at Rs. 23 lakhs. It is very difficult to give a satisfactory estimate, because the share of surplus profits taken by companies varies on every line. But I attempted to average out the share of surplus profits due to the Company-managed railways who were purchasing rails in this particular year, and put it at a fair guess at about one-tenth. They were proposing to buy rails, the cost of which would be raised by Rs. 23 lakhs if the price were raised by Rs. 40 a ton. One-tenth of that gives you Rs. 2,30,000.

Sir Clement.—One point I should like to mention here. These figures of course are giving you the financial results of one year. If you did it for another year you would have to add these results and multiply by 2. If you carried on for another year you would have to multiply by 3.

President.—It really resembles to a sinking fund. It goes on increasing from year to year.

Mr. Parsons.—It would mean that in 10 years it would be Rs. 50 lakhs, or half a crore falling on railway revenues much on this one particular article, namely rails!

Dr. Matthai.—There would be an annual increase of this amount.

Mr. Parsons.—Yes. If this is a good average year.

Sir Clement.—Rs. 5 lakhs this year, Rs. 10 lakhs next year, and the figure goes on increasing as in the tale about the nails in the horse shoe.

(Continued on Tuesday, the 27th July, 1926.)

The Representations of the Wagon Builders.

President.—We shall first take our letter to the Railway Board, and their reply thereto, on the representation of the wagon builders. As regards the order for 1,750 wagons placed with the Indian Standard Wagon Company, referred to in paragraph 3 of your reply, from their point of view the case is this. They tendered on the basis of an order for 2,000 wagons and they got an order 1,750 wagons. You say that that was the proper order to give for two reasons. Firstly, you were advised that their capacity was 1,750 wagons for that year. Shall I take it that you were advised by the Indian Stores Department on that point?

Sir Clement.—Yes.

President.—You don't make any independent enquiries as to the capacity of the works.

Sir Clement.—We get the Indian Stores Department as a Government Department to do it for us.

President.—You say that you are not prepared to express any considered opinion on the capacity of the Indian Standard Wagon Company.

Sir Clement.—I don't think I am.

President.—The position becomes rather difficult if we cannot get an idea of the capacity of the works in this way. When we go into the question of their costs to determine their fair selling price, if we divide their overhead charges and profit by 1,750 only, accepting your estimate as correct, then the price goes up.

Sir Clement.—This of course is an estimate made for that particular order. At that particular time of the year, from the way in which they were progressing with their other work, the Indian Stores Department did not consider that they could turn out more than 1,750 wagons in 1926-27.

President.—Then, their costs go wrong.

Sir Clement.—You cannot expect mathematical accuracy in these things. They might be able, by pushing on the work, to increase their output very considerably. On the other hand they might be able to keep their overhead costs in check while turning out a smaller number. You cannot take it that they must always turn out a fixed number.

President.—As regards the past, that was their complaint. As regards the future, we are trying to estimate their fair selling price. If we were to divide their total cost by 1,750 wagons, naturally their selling price would go up.

Mr. Parsons.—I think that it is a question on which you should obtain evidence from the Indian Stores Department. We have not got the machinery to enquire into the capacity of any of these firms. We accept the opinion of Mr. Pitkeathly and his officers.

President.—We of course examined Mr. Pitkeathly and he promised to give us his opinion. But I should like to point out to the Railway Board that there is this risk that if the capacity is under-estimated we should go wrong in arriving at their fair selling price.

Sir Clement.—The capacity of their workshop is anything which they like to make it. If they like to push on their work, I have no doubt they can do so. Mr. Fairhurst, their Works Manager, told me that he was confident of being able to turn out 200 wagons a month. I have no reason to disbelieve him. Whether that has got any value as a mathematical figure for you to work on, I do not know. It is for you to decide. If they got an order for 5,000 wagons, for all I know they might be able to push their output up to that figure.

Mr. Mather.—Not with their present plant.

Sir Clement.—There is a limit to it, but it is very difficult to say what is the limit. They are working a single shift. When economic pressure is brought to bear on them, they can devise many methods of speeding up. You cannot say definitely that so and so is the figure, and nothing more or nothing less. Anyhow we rely on the Indian Stores Department for the estimate.

President.—Nothing would please the wagon builders more than if we took their capacity at 1,750.

Mr. Parsons.—This figure is merely with regard to a particular date in November. At that time, the opinion of the Indian Stores Department was that the Indian Standard Wagon Company could do only 1,750. It does not mean that the figure would not be different in December. I have no doubt that their figure in the following March would again vary.

Dr. Matthai.—At that time what was the estimate that you got of the additional capacity of the Indian wagon builders?

Mr. Parsons.—

Messrs. Jessop and Company	500
Messrs. Burn and Company	1,000
The Indian Standard Wagon Company . . .	1,750
The Peninsular Locomotive Company . . .	*Nil.*

Mr. Mather.—Does it mean that they were not prepared to give an opinion about the capacity of the Peninsular Locomotive Company?

Mr. Wrench.—They considered that they had orders in hand sufficient to carry them through the year.

Mr. Mather.—Are they all additional to the orders which the firms already had?

Mr. Wrench.—Yes. In the case of Burn's it was in addition to the underframe order they had already in hand.

President.—As regards the lump sum reduction, the British wagon builder makes an alternative offer that if you give him the full order, he gives you a lump sum reduction because his costs come down. Would not the same consideration apply to these people?

Sir Clement.—Of course it would. The more orders they get, the more they can spread their overhead charges.

President.—Would it be possible for the Railway Board in that case to ask them to quote a revised figure?

Mr. Wrench.—I think that the Indian builders were asked to quote a lump sum reduction last year.

President.—They would then have no reason to complain.

Mr. Parsons.—I take it what you mean is that when we found that they could not produce 2,000 wagons and that they had quoted a price on the basis of 2,000 wagons, as we could only give them an order for 1,750 wagons, we might have asked them to revise their quotation. But as there was no reason to believe that they would have given a lower quotation for a smaller number, why should we do so?

Mr. Mathias.—I think they protested at the time.

Sir Clement.—They did. As far as we are concerned, it is purely a business transaction. When we call for tenders we don't bind ourselves to buy. It is also open to them to refuse the order if they are offered it.

Mr. Mather.—Supposing they had refused, what would have happened? Presumably the order would have gone abroad.

Sir Clement.—Probably.

Mr. Mather.—Would it be a practicable alternative for the purchaser to place an order on the basis of the lowest price?

Sir Clement.—It is not practicable to negotiate with firms on prices when considering tenders.

Mr. Mather.—You have given a case in evidence in the last enquiry—Enclosure II to endorsement, dated the 17th August 1925,—in which you were referring to orders placed in 1924-25. "They (Railway Board) had therefore in any case to order abroad 730 A-2 and 1,025 C-2 wagons, which the Indian tendering firms could not deliver to them in 1924-25. But at the same time the Indian firms could naturally not be expected to accept orders for only 320 A-2 and 225 C-2 wagons at prices which they had quoted for a much larger number, nor would so limited an order fulfil the object of section 4 of the Steel Industry (Protection) Act of establishing the wagon building industry. It was necessary therefore to give the firms orders involving an extension of delivery into 1925-26."

Sir Clement.—It was a question of degree.

Mr. Mather.—The difference between the two years is certainly great.

Sir Clement.—Yes.

Mr. Mathias.—Supposing they had asked for a higher price on account of the reduction in numbers, the Railway Board would not have agreed to that.

Sir Clement.—We have been perfectly reasonable in this case. They were willing to take the order. They did not ask for a higher price. They only wanted a larger number.

Mr. Mathias.—In their letter (No. O. M. W. 2727, dated the 10th December 1925) to the Secretary, Railway Board, they said "If they (Railway Board) feel that they are not in a position to place further orders as suggested, would they please consider the revision of the prices of the orders placed, so as to include the Rs. 133 difference in price due to the smaller number being ordered."

Mr. Parsons.—It was always open to them to refuse that order. But they accepted the order.

Sir Clement.—I don't see what is the object of their present protest. They have not delivered the wagons yet.

Dr. Matthai.—How many wagons were they expected to deliver by now?

Sir Clement.—I don't remember exactly. But we have not got any so far.

Dr. Matthai.—Do you remember by May how many wagons they were expected to deliver?

Sir Clement.—They asked us to call for tenders earlier so that they could start delivery in the early part of the year. In this case we called for tenders in November so as to enable them to carry through their programme.

President.—What is the ordinary interval between placing an order and commencement of delivery?

Mr. Wrench.—About six months.

President.—Does that apply to Indian builders as well as to foreign builders?

Mr. Wrench.—Foreign builders take about three months.

President.—Has there been any serious delay in the past on the part of the Indian Standard Wagon Company in making delivery?

Mr. Parsons.—Not since the bounty scheme came in.

Sir Clement.—They have given very good delivery once they got started.

President.—So far as the capacity of the works is concerned, we should take evidence ourselves and be guided by the advice of the Indian Stores Department as far as possible. We have got to find out what the capacity of these wagon builders is in order to arrive at the price.

Sir Clement.—I don't think it is possible to estimate the yield or capacity of a firm like Burn and Company or Jessop and Company because it depends on the amount of other work they have in hand. But as regards the

Indian Standard Wagon Company, the Indian Stores Department can give you an estimate. I passed by Jessop's works this morning and found that they were working in some temporary open sheds and it is very difficult to say what would be their capacity. They can double the sheds and thereby double their output at any time.

President.—We told the wagon builders that in any proposal that we might make we would treat the Indian Standard Wagon Company as a typical wagon manufacturing concern in this country and if we recommend any protection it must be based on their capacity and costs, and their costs, as far as we have them, are certainly less than the cost of other companies. Our investigations, so far as they are directed towards getting the prices, would be based more or less on the Indian Standard Wagon Company's figures and that is why we are anxious to get your opinion as to what you would consider their reasonable capacity. It is essential for our purpose to know that.

Sir Clement.—I can only say again that we have made no investigation on our own. We are guided in these matters by the Indian Stores Department. The works manager however told me that he could work up to 200 wagons per month and from what I saw I don't think they would have any difficulty in doing so. I don't wish to go further than that.

President.—That is near enough for practical purposes.

Mr. Wrench.—It all depends on the type of wagon.

Underframes.

President.—As regards underframes, there also it is very difficult to make any definite estimate. Orders must be very irregular from your point of view, as I understand, so far as underframes are concerned.

Mr. Parsons.—It may be any quantity. It varies from year to year.

President.—But the total capacity for making underframes is very limited in the country, even on their own figures. Messrs. Burn and Company claim they make 250 and Messrs. Jessop and Company about 250. But about Jessop and Company you cannot say anything at all, as you pointed out.

Sir Clement.—You cannot call underframes an industry at all, because any works which can make structural steel can make underframes, and there again you cannot estimate the capacity. There are a lot of other firms who can take to manufacturing underframes quite easily, such as Messrs. Braithwaite and Company, as there is nothing special about underframes.

Mr. Mather.—Do you happen to know whether any other firm has supplied the railways with underframes in recent years?

Sir Clement.—I don't think so. We are told that Messrs. Braithwaite and Company are thinking of going into the underframe business.

Dr. Matthai.—That would be equally true about wagons; there would not be anything different there from structural steel?

Mr. Wrench.—There are more forgings in a wagon than in an underframe in relation to the total cost. You will find the percentage of forgings in a wagon much higher than in an underframe.

Dr. Matthai.—In the case of the Indian Standard Wagon Company, if there is a shortage of wagon orders, can their equipment be used for the manufacture of underframes?

Mr. Wrench.—I am told that they are laid out for building four-wheeled wagons but are not, I think, laid out for the manufacture of bogies.

President.—We really have not got enough material to find the costs of wagons. The Indian Standard Wagon Company figures may be fairly reliable. As regards underframes we have got Messrs. Burn and Company's figures, but they are kept in a way which is rather difficult to understand because the underframe building work is carried on in conjunction with general engineering work and they have to make certain allocations and

so on, and I was considering whether it would be necessary to go into a detailed examination of the costs of an underframe, or whether it would be simpler to base our estimate of the cost of an underframe on that of a wagon.

Sir Clement.—I don't quite follow how you will do that.

President.—We will take what we call the fair selling price of a C-2 wagon in the case of the Indian Standard Wagon Company and then we say this is the c.i.f. landed price of the foreign wagon and the difference between the two is the measure of protection. Having got that figure we apply some sort of rough percentages between wagons and underframes and derive the measure of protection. Supposing we got 5 per cent. duty or bounty equivalent to 5 per cent. *ad valorem* in the case of a wagon and then we say 4 per cent. in the case of underframes is to suffice. That is the kind of thing I have in mind.

Sir Clement.—I don't see on what basis you can estimate that amount.

President.—I admit it will be only a rough estimate.

Mr. Wrench.—Are the Tariff Board satisfied that the methods employed by various wagon builders are satisfactory? Don't they think that these should be very materially improved so as to bring down their costs?

President.—When we determine the fair selling price we have got to go into that question and give our opinion as to their methods, and having made allowance for everything we have to come to a finding as to the fair selling price.

Sir Clement.—Are you going to take their costs to arrive at what you consider a fair selling price?

President.—We scrutinize the costs and make reductions where necessary. We do in the case of all industries we have to investigate.

Sir Clement.—It is quite possible that by a wholesale change of methods they may be able to cut the costs down very considerably. But there is one point I would like to put to the Tariff Board. What would the Tariff Board feel about it if we considered that we in our workshops could produce underframes by improved methods and produce them cheaper than these firms could do? We maintain that we shall not want any protection and that we can produce them in our workshops cheaper than they can be imported. It is a hypothetical question to some extent, but is that contrary to the policy of protection, that we should build up our own industry?

President.—So far as we are concerned we may say it does not matter to us who manufactures these underframes; if the Railway Board made them themselves so much the better. I was explaining the position to the companies when they raised the question of the Railway Board and the railways doing things themselves. We said that was not a point for us to consider, we were only interested in the manufacture of the article in the country, and whether the Railway Board or somebody else manufactured it, it was the same thing to us. As to whether the Railway Board is a proper agency for business of this kind is a question of policy which must be decided elsewhere.

Dr. Matthai.—From the point of view of the present enquiry, if you could give us definite evidence by how much the cost of producing an underframe goes down by the introduction of improved methods in your workshops, it would be of very great importance.

Mr. Mather.—May I suggest that this arises out of the recommendations of the Railway Workshops Committee?

Sir Clement.—That is so.

Mr. Mather.—This suggestion that it will be possible to produce at a cost which would fairly compete with the imported underframe is based rather on a forecast of what it will be possible for you to do and not so much on any actual production that is being undertaken by the railways; you have no actual figures to give us?

Sir Clement.—There is a great deal of evidence in the prices that have been offered us in our tenders that these firms are able to compete successfully with the foreign tenders.

President.—But their case is that they do not make any money out of it.

Mr. Parsons.—I have no doubt that before accepting a statement of that kind you will go into the question of their costs.

President.—I take it that the Indian Standard Wagon Company may be taken as fairly up to date so far as the Indian wagon building industry goes?

Mr. Wrench.—Yes. They have multiple drills and things of that sort.

Dr. Matthai.—You were speaking of underframes. As far as these are concerned there is less competition from Home than with regard to wagons?

Sir Clement.—I don't think there is less competition, but orders are smaller and there won't be the same incentive for an outside firm to quote as in the case of wagons where the orders are large and come regularly.

President.—As regards wagons, what I had in my mind was this. We have got Messrs. Burn and Company's costs but they are very difficult to follow. We have got the Indian Standard Wagon Company's costs. Then we compare Burn and Company's cost with the cost of the Indian Standard Wagon Company as found by us and make a reduction where necessary in the former. Don't you think in that way we might get somewhat nearer to an economic cost?

Mr. Parsons.—I don't think you would. On certain occasions it has been necessary to give assistance to the wagon building firms; but our experience on the Railway Board is that it is quite unnecessary to give any protection with regard to underframes. That is to say, normally they can get our orders under the ordinary Stores Purchase rules. If when they came before you they said that they made no profit or made a loss, that I am afraid is a statement which the Railway Board can in no way check. That statement would require a very careful investigation into their costs to prove that it is true.

President.—That is why we have told them that we might have to disregard their cost and proceed upon the cost of the Indian Standard Wagon Company as far as we are concerned.

Mr. Parsons.—You would be applying figures which you have taken more or less from the Indian Standard Wagon Company to firms which do general engineering.

President.—We know it would be a difficult thing but we have no other *data* to go upon.

Sir Clement.—Messrs. Burn and Company have given the cost of an underframe on page 247 of the Blue Book. The only thing that they make out is that they managed to squeeze Rs. 200 profit. In considering those tenders—at that time we finally gave the contract to Jessops at about Rs. 9,500—are we to assume that Jessops are losing on that, because Burn and Company gave that figure.

Mr. Mather.—This figure suggests that Messrs. Burn and Company's manufacturing cost of an underframe is Rs. 10,283—that is with profit. Jessops took the order at Rs. 9,500. It means they have taken the price at Rs. 500 below Burn's estimate.

Sir Clement.—Losing profit and losing Rs. 500 on each underframe.

Mr. Mather.—If their actual costs prove to be as estimated by Burn's.

President.—As regards the last tender of Messrs. Burn and Company, I think you make a point of it somewhere that they quoted a higher price.

Sir Clement.—Yes.

President.—Their explanation is this. They were asked to deliver before the end of the financial year 98 underframes for the Great Indian Peninsula Railway. The quotation was given on that assumption and Jessops under-

quoted them. But the time was afterwards extended to July 1927. That is the reason that they give for a higher quotation.

Mr. Mather.—Burn's contention was that if they had been given that alternative, they could themselves have quoted a lower price, because it would mean that order would keep their works engaged at a time when they would otherwise be slack.

Sir Clement.—The Great Indian Peninsula Railway wanted 4 different types and in each case Burn's tenders were considerably higher than Jessops, and Jessops could deliver 3 out of the 4 within the financial year and so we agreed to give the whole of the order to Jessops.

Mr. Mather.—You extended the time for the whole of the order?

Mr. Wrench.—They could have delivered 3 out of the 4 types within the financial year. We gave the order for 4 types and extended the period by 3 months.

President.—They say that Jessops were able to underquote, because their time was extended.

Sir Clement.—They omitted to say that they had 4 separate tenders.

President.—The fact that they had 4 separate tenders would have mattered if Jessops knew that time would be extended.

Sir Clement.—They didn't know.

President.—In the case of three tenders they promised to deliver within the time.

Sir Clement.—Yes.

President.—I take it it would not be easy for you to give us any estimate of your normal requirements of underframes.

Sir Clement.—I don't think it would be. It varies a good deal from year to year.

Mr. Mather.—There is a proposal for standardising the types of underframes and I take it that when that is done the orders for underframes will be pooled by the Railway Board in the same way as wagons.

Sir Clement.—Possibly for State Railways.

Mr. Mather.—These are clearly the railways over which you have real power. It would mean that instead of 3 or 4 separate tenders, possibly all of the same type and possibly all wanting delivery in 4 or 5 months there would be one combined order spreading the total delivery over a longer period. That would lead to more economical manufacture and therefore presumably you would get a better price.

Sir Clement.—Until we get the standard settled, we must go on more or less from hand to mouth, but we do intend to call once a year for the State Railways when we have standard designs completed and settled.

Mr. Mather.—Instead of expecting delivery within 3 or 4 months, delivery period will be rather longer for a bigger quantity.

Sir Clement.—We hope to call for tenders for the year's supply, but it will take some time to do that.

Mr. Mathias.—In connection with the Railway Workshops Committee's Report, have the costs of building underframes in your workshops been worked out?

Sir Clement.—They have not been worked out.

Mr. Mathias.—Will they be worked out in the near future?

Sir Clement.—I cannot say. We have not come to any decision on that.

The position of the Railway Board.

President.—As regards your reply to one of our letters, dated 29th May 1926, to the Railway Board, you tell us you hope to be advised by the Tariff Board before a decision is reached. I really wish to know whether we are really advising the Railway Board or the Government of India.

Sir Clement.—The Government of India.

President.—Am I to understand that this means that the Government of India there when they consider this part of our Report are represented by the Railway Board?

Mr. Parsons.—The position of course is that proposals of the Tariff Board go to the Commerce Department. Before placing the case before the Governor-General in Council they consult all the departments concerned, which include the Railway Department of the Government of India, the Finance Department and the Industries Department.

President.—I understood that the implication was that our report on these points would be considered by the Railway Board, before a decision was reached.

Mr. Parsons.—That was not the implication.

President.—I understood that it was perhaps for that reason that you declined to give us your opinion on this point.

Mr. Parsons.—The position is that the Railway Department, of which Sir Clement Hindley is Secretary, is very intimately concerned in this. Therefore when your recommendations go to the Commerce Department, they will ask us for our opinion.

President.—It is rather a difficult position for this Board, if its proposals are considered by the Railway Board in so far as wagons and other similar things are concerned.

Sir Clement.—All departments of the Government of India are concerned in any decision that the Government of India give. It is part of our business to advise the Government of India when a question like this comes up before them.

Mr. Parsons.—On the last occasion your proposals were considered by the Railway Department.

President.—We cannot very well question what the Government of India do after the report goes in. So far as the Railway Board are concerned, we asked the opinion of the Railway Board as the chief consumers, we are told that as Government of India they may have to consider our proposals and therefore they cannot give us any opinion.

Sir Clement.—Obviously we cannot give any opinion now on these proposals, because anything that I say commits the Government of India.

Dr. Matthai.—In the case of every application the Tariff Board would not be doing its duty unless it took the position of the consumers into account. Here is the Railway Board who are the chief consumers in this case and if they have no opinion to give us, it places us in a position of very great difficulty. We don't know the point of view of the consumer.

Sir Clement.—Exactly the same position will be taken up by any Secretary to the Government of India.

President.—We appreciate your difficulty. But at the same time it does seem to me that the position is somewhat anomalous. It is our duty when we are enquiring into an industry to see how the consumer is going to be affected. Here the Railway Board are the only consumers. We want to know what your opinion is. You say you are precluded from giving any opinion, because you are also part of the Government of India.

Sir Clement.—Even if we were private consumers, we should find it difficult to give an opinion.

President.—You do not propose to give us your views as a consumer.

Sir Clement.—From the point of view of the consumer no industry requires protection.

Dr. Mattai.—Assuming that there is a case for protection, it would be perfectly legitimate for the Board to ask the consumer. "In any case you are going to be burdened! There are these proposals before us—which is likely to be the least objectionable from your point of view?"

Mr. Parsons.—As the extra amount we shall have to pay is presumably going to be the same under each proposal, the answer is " We don't mind, purely as a consumer ".

Dr. Matthai.—It is worth while knowing that that is your opinion.

Sir Clement.—The real difficulty is if you ask any consumer whether an industry requires protection, he will tell you, no it doesn't.

President.—We do not ask the Government of India to give us any opinion. As a matter of fact personally I was not even aware that the proposals of the Tariff Board were considered by the Railway Board and not only the Commerce Department.

Sir Clement.—Of course as a matter of rule any subject that comes up before the Government of India is considered by all departments concerned.

Dr. Matthai.—We are asked to administer discriminating protection and the whole point of discrimination is that we have got to regard the well being of the consumer. We ask " what does the consumer feel about this question? " and there is no answer. The Tariff Board is placed in an impossible position.

Mr. Parsons.—I am afraid you are up against the constitution of the Government of India.

President.—You are in the position of a consumer, and you are yourselves so to say one of the judges as between the consumer and the industry.

Mr. Parsons.—Would it be of any assistance to the Board if I said this? In my opinion it would be just as easy, as a mere matter of financial machinery, to make arrangements under which the cost would not fall on railways, whichever method of giving protection to the industry is proposed.

President.—The argument comes to this. In every scheme of protection, the consumer has got to bear some burden, but the Railways consider that they themselves are in a peculiar position and therefore they don't wish to take upon themselves any burden which would attach to any other consumer.

Sir Clement.—I think we had better put it this way. We consider ourselves as trustees in a way for all the people who use railways and one of our primary duties in working the railways is to see that the people who use railways are not burdened.

President.—People who use the railways, speaking generally, are mostly the very people who may be described as taxpayers. Is there any substantial difference between the two?

Sir Clement.—We want to free transportation from any undue burden. We believe that transportation is the life-blood of the country. It is essential that transportation should be freed from any undue burden.

President.—Here the position of railways is different from what it is in other countries because the railways belong substantially to Government. If the railways were to be relieved of all burdens, because of protection, it follows that the burden must be transferred to somebody else because protection does involve some burden. In this case what is being done is that from the railways which are used practically by everybody the burden is transferred to the taxpayer. He is practically the same person who carries the burden in a different capacity.

Mr. Parsons.—It is a different distribution of the burden among the inhabitants of this country. That is the correct statement of the position.

Dr. Matthai.—I take it that of these specific proposals we have put forward you would object least to the proposal which places the smallest amount of burden on the railways.

Mr. Parsons.—Yes, in my capacity as Financial Commissioner for Railways.

Dr. Matthai.—May I go a step further and ask which of these proposals in your opinion would place the smallest burden on the railways?

Mr. Parsons.—I am sorry I have not worked it out.

President.—We have in every case got to calculate the total burden on the consumer. Supposing it was a case of protection by means of duty, for

the same of argument, and we came to the conclusion that the additional burden on the railways would be Rs. 50 lakhs and then we said that it was for Government to adjust that amount between themselves and the railways, would not that meet the case?

Mr. Parsons.—The question is one for discussion between the Finance Department and the Railway Department, as to whether there should be such an adjustment.

President.—We have of course got to calculate the burden. Supposing the burden appears to be substantial and we ask the Government to adjust the matter with the railways, would not that meet your case?

Mr. Parsons.—As I have said, it is possible to make an adjustment without any particular complexity.

Mr. Mather.—There are no administrative difficulties.

Mr. Parsons.—So far as I can foresee, there are no administrative difficulties. If the Government of India and the Legislative Assembly approved, it would be possible to make the necessary adjustments.

Inspection of materials.

President.—As regards the substitution of Tata's special soft steel for Grade A-iron, can you give us any idea as to when you are likely to pass your final orders?

Sir Clement.—We shall make that provision I suppose in our next call for tenders. We are revising the specification for the next call for tenders.

President.—So far as the Railway Board are concerned, they have got sufficient material to pass final orders on that point.

Sir Clement.—I think we have decided it.

Mr. Mather.—That will apply throughout.

Sir Clement.—Grade A iron is slightly higher than Tata's special soft steel.

President.—As regards the double inspection, you give one case. Is that the only one that has come under your notice?

Sir Clement.—I think that is the only case that ever occurred. It is still under investigation by the Indian Stores Department and the Railway Board.

President.—Does the Railway Board propose to pass any general orders making double inspection unnecessary?

Sir Clement.—No. We insist upon inspection of materials in England and also upon inspection by the Indian Stores Department in the course of manufacture here—which means another inspection.

President.—Is that inevitable?

Sir Clement.—I think so. I don't see that there is any hardship to any firm.

President.—The hardship may arise when a finished part which has been inspected and passed comes out here and is condemned.

Sir Clement.—That is not likely to happen again, but in this particular case some material which had been inspected at home was found to be not satisfactory when tested and so had to be rejected. It is a point against the inspection done in Great Britain. It is very unusual. I don't think any other case has occurred.

Mr. Mather.—I am told that there have been very few in the last couple of years.

Sir Clement.—The position as far as we are concerned is that we insist upon the material being inspected before it is sent out and I think that is absolutely necessary in the interests of the manufacturers themselves, and we rely on the Indian Stores Department for the inspection of the articles during manufacture and on finally passing in this country. We could not in our own interests issue orders to the Indian Stores Department that they

were not to inspect the material. I don't think that we can issue orders one way or the other.

Mr. Mather.—You don't take the other view that you ought to order the Indian Stores Department to reinspect in every case?

Sir Clement.—We leave it to their discretion and in 99 cases out of 100 they don't find it necessary to criticise the quality of the material. I don't think that this is a very important matter really. From the point of view of the manufacturers it is not likely to cause any serious trouble.

Mr. Mather.—In the few cases where it does happen, it is irritating to the manufacturer.

Sir Clement.—My feeling is, one case having occurred, it is not likely to occur again.

President.—About railway rates their point is a little different. What they mean is that when they buy vacuum brakes in Calcutta, they get the special railway material rate but that if they get vacuum brakes direct from England, they don't get the special rate.

Sir Clement.—No distinction is made between local and imported stuff. All that is necessary is to get a certificate which can be easily obtained from a railway official.

Mr. Parsons.—We were not able to discover the facts of this case. The East Indian Railway could not trace it.

President.—As regards the capacity of the Peninsular Locomotive Company, you say that you are not in a position to give any opinion.

Sir Clement.—We can only give you the facts.

Mr. Mather.—You have told us that up to 31st March 1926 they had delivered 215 wagons. Have you got figures later than that?

Sir Clement.—We will let you know, as soon as the next returns come in.

President.—Apparently they did not give you a close tender because they could not execute the order. On the last occasion they got no orders at all.

Sir Clement.—Their prices were very high. The question of capacity did not really come in.

Questionnaire on Wagons.

President.—The first question is about the total number of wagons. We have got that from the railways. We will now deal with your answer to question 2 about standardization of types. When did this Carriage or Wagon Standards Committee come into existence?

Sir Clement.—In December 1924.

President.—I take it now the position is that the Committee has reported and you have accepted their recommendations and have arrived at a decision but that you don't exactly know what the designs and specifications would be?

Mr. Wrench.—The designs for these types are now being drawn out by the Consulting Engineers in England, and I think we have received designs for one type.

President.—When do you expect to get the designs in a form which would enable you to ask for tenders?

Mr. Wrench.—We have got one set and we expect to get more out shortly. We shall have to call the Committee together to consider these drawings and that I hope will take place within the next three or four months, and, in the ordinary course, we should be in a position to call for tenders this cold weather.

President.—Will these 13 types that you mention be very different from the present types?

Mr. Wrench.—Not very different, but there have been special alterations which have been made to make them suitable in future for use with central

couplings. That is the main difference. These wagons will be useful for applying the central coupling.

President.—Would this involve the making of fresh jigs?

Mr. Wrench.—They will have to make new jigs for frames and bodies.

President.—First of all you have to build sample wagons and after that you will call for tenders. Is that right?

Sir Clement.—Yes, we must have samples built before we can call for tenders.

President.—The wagon builders here feel that they will not have any work to do for a few months?

Sir Clement.—I see that they have said so.

President.—That I suppose, so far as the Railway Board are concerned, cannot be avoided?

Sir Clement.—I don't think it can be avoided.

President.—From their point of view it is going to be rather expensive, is it not?

Sir Clement.—I think they are purposely overstating their case. They have got orders to carry them through to next March.

President.—Are the two types of special wagons, entirely new types?

Mr. Wrench.—I think one is the cattle wagon. Formerly we had wooden floor boards in these and the Committee recommended these new types in their place. A very small number of them is required.

President.—Then I don't think these concern us at all because the Indian wagon builders are not likely to manufacture them. As regards metre gauge wagons: I have not been able to discover any case since the bounty system has been introduced where the Indian manufacturers have manufactured any metre gauge wagons.

Sir Clement.—I think they manufactured some but not since the bounty scheme came in. But they don't like to go in for metre gauge wagons because they are situated on broad gauge lines and cannot therefore deliver direct on rail.

President.—Is that a disability?

Sir Clement.—Not as compared with the foreign manufacturer. The foreign manufacturer has got to send his stuff out in parts on steamers. The Indian manufacturer could deliver exactly in the same way in the case of metre gauge wagons. I don't think they have put in any satisfactory tenders except Jessops.

Mr. Wrench.—We gave them orders for broad gauge instead.

Sir Clement.—We filled their capacity with orders for broad gauge wagons.

Mr. Mather.—The Indian Standard Wagon Company refer to the possibility of building metre gauge wagons—building and sending them away on broad gauge bogies.

Sir Clement.—To go back to the special type wagons—they are bogie wagons for special purposes for carrying timber and boilers and so on. They are required in small numbers.

President.—Then I take it the Indian manufacturers are not concerned with these at all.

Future requirements of railway wagons.

President.—Then we come to the question of replacements. I don't think you have been able to give us any figures so far?

Sir Clement.—I am not quite sure that we can give you any figures, but I want to explain the position. We have had brought constantly to our notice in the course of the last year or two that certain improvements have been made

in the working of our traffic, and of course you must remember that we have spent a great deal of money on improvements—improving marshalling yards, doubling the lines, improved facilities in our workshops for repairs and so on. I can give you a long list of the improvements made in working the traffic. The net results have been that we are now working our traffic more efficiently and economically and we find that at the present moment we are apparently very largely over-stocked with wagons. That is the fact which I want to explain to the Tariff Board. The actual effect at the present moment is that according to our last week's return we had something like 24,000 wagons stabled. Of course it may be said that it is due to a slump in trade, but the fact is that we are carrying practically the same volume of traffic as we did last year when we had only 17,000 to 20,000 wagons stabled, and a very few years before that there was what was called a wagon shortage, and there were very few wagons stabled indeed even in the slack season. We have spent a great deal of money on improvements to facilities for working traffic and we have made great improvements, in loading of wagons, the loads of trains, speed of trains and things of that sort; and we foresaw that all this would enable us to get better duty out of our wagons. But I think that none of us was quite so sanguine as to expect that we should get into the position so soon, of actually having surplus wagons.

President.—What about the coal industry?

Sir Clement.—We are carrying more coal than we did this time last year.

That is the actual position. We have made a careful investigation of the actual work that wagons have been doing during the last two or three years. We have a statistical figure, on which we have been working, which gives us the average work done by a wagon in carrying per day in the year and that figure is steadily improving on all our railways. If we assume a reasonable basis of continued improvement in wagon user we find that we should be able to carry all the traffic which we can expect during the next five years with the number of wagons we have got at present. In fact our figures show that we shall have an excess of wagons for several years to come.

You may say 'what about your renewals'? Our reply is that during the next few years we shall be able to get rid of wagons which are over-age and a large number of wagons which are more or less obsolete without replacing them.

This is the information which I wanted to place before the Tariff Board because it puts the Indian wagon industry in a very parlous condition. We have not put it down on paper before because we were making these investigations and the results had to be tested before we could go further by getting certain additional facts and practical results. The indications are however very clear and they are that business is moving in the direction in which we designed it to move. We have some railways where the working has been improved more rapidly than on others and that gives us a very definite indication as to what can be done if we apply the same methods to other railways.

The immediate difficulty has been in regard to the orders which normally we should be placing next cold weather for next year. As I have said, on the statistical examination which we have made, the indications are that we are not likely to want any wagons for some years, the indication is perfectly clear with regard to next years requirements and the figures show that we should not really be justified in ordering any wagons at all. In making this investigation we considered the position of the railways as a whole and also considered the position of each railway separately. We had already discussed the proposals of each railway with its agent when they stated their estimated requirements. The result of each discussion was a considerable reduction. Subsequently we applied these statistical figures and we have modified the programme accordingly. The programme as now revised indicates that we shall require very few wagons indeed next year and mostly of special types.

Mr. Mather.—Does this apply to the railways as a whole or only to the state-worked lines?

Sir Clement.—Yes. We had to consider three of the company railways separately because their figures of working show that they are getting into a position of shortage of wagons and are not over-stocked like other railways. For that reason we proposed to order a few wagons for them, but unfortunately for the wagon building firms we can now supply these from the orders which have already been given in respect of the State railways and which we don't require.

President.—It is a very important statement you have made.

Sir Clement.—May I just explain in detail some of the factors which have brought about this startling result, which might otherwise be open to some criticism.

The number of wagons under repair at any one time on the railways has a very important bearing on this case. A few years ago railways had consistently something like 9 per cent. of their wagons under repair at any one time. By improving the methods of repair and by improved methods in our workshops we have been able to reduce the number of wagons under repair at any one time very considerably. Take the Great Indian Peninsula Railway as an instance. I think six months ago they were taking 30 days to repair a wagon. Now by improved methods, without any very great expense, they have been able to reduce that to from 6 to 10 days. That is equivalent to their having 1·5 per cent. of their wagons under repairs. Now certain railways, *e.g.*, the Madras and Southern Mahratta Railway, have got 8 per cent. under repairs at present and we consider that by adopting better methods this can be reduced to 1·5; that is a saving of 6½ per cent. in their wagon stock. Similarly, the Eastern Bengal Railway has 8 per cent. at present and when that is brought down to 1·5 per cent. they would get a considerable addition to their wagon stock. We know the Railways have already made certain improvements in this figure, and we expect them within the next few years to bring the figure down to the basis of the Great Indian Peninsula Railway. That is one factor.

The position is therefore that we expect to get all these railways to work at 1·5 per cent. under repairs which would result approximately in an addition of 4,500 wagons to our railway wagon stock.

The next factor I should like to mention is the various measures for improving the track and strengthening the bridges which have resulted in our being able to take heavier engines and heavier goods trains. For instance on the Itarsi-Jubbulpore Section of the Great Indian Peninsula Railway, we are using heavier engines to increase the load of the train. That is a very big improvement. That is only one instance of the many improvements that are taking place. The East Indian Railway is now just about completing a programme of bridge renewals which has been going on for some years. When the last bridge is completed they will be able to mark up the carrying capacity of a very large number of their wagons. At present they mark down their carrying capacity as 19 tons. They were originally designed to carry 22 tons and until this bridge programme is completed they have to be kept at 19 ton capacity. As soon as the programme of bridge renewals is completed, they will be able to carry 3 tons more per wagon. I have not got the exact figures here, but we believe that it would be equivalent to adding 5,500 wagons to the East Indian Railway stock simply by marking up the carrying capacity.

Mr. Mather.—Would you be able to get sufficient loads to use the extra capacity?

Sir Clement.—Even if we do not, the capacity will be there.

Mr. Mather.—You expect to be able to increase the average load?

Sir Clement.—Very considerably. Most of the wagons are used in coal traffic. We will be able to carry three tons more per wagon. On an average we are loading over 2,000 coal wagons every day.

I can give you a few more of these instances. We are improving the working in marshalling yards by a very close study of statistics and we have not so far assessed the actual improvements that have been effected, but we have one or two instances where improvements have been effected. For instance

in the Delhi area 2,000 wagons pass through every day on an average and we have been able to save 16 hours on each wagon passing through the area from one end to the other end. That of course means really a saving of 1,300 wagons throughout the year. We have got a number of cases where we have been able to improve the capacity of the line by doubling the tracks. There are many of them but as one instance, on the Grand Chord on the East Indian Railway we shall very shortly finish doubling the tracks which enable us to take 10 goods trains a day by a route shorter by 50 miles on each train journey. That naturally increases the number of wagons available. Further we have now various other improvements, *viz.*, the extension of the use of telephone train control which has enormously increased the capacity of certain sections of the line and finally the increased speed of trains by the use of vacuum brakes throughout our goods trains which has never been possible until this year. We have been able in certain experimental trains to maintain an average speed of 20 miles an hour over long runs. The average speed of goods train at the present moment on certain selected railways is just below 10 miles an hour, but they have improved during the last 3 years by 10 per cent. of their speed. The East Indian Railway has gone up for instance from 9·4 to 9·9 the difference being about ·5. Great Indian Peninsula Railway 9·3 to 10·3 per hour. Then the last and perhaps the most important factor is that we have been buying during the last few years wagons of 22 ton to 23 ton capacity as compared with 15, 16 or 17 ton wagons capacity. We are not able to assess the exact value of this improvement but the Great Indian Peninsula Railway for instance have still 40 per cent. of their old stock of 16 ton capacity. There is a possible improvement in the long run of a very large increase in carrying capacity. These are the reasons for the rather difficult position we find ourselves in at the present moment and as the whole of the energies of all Railway Administrations are directed towards improvement in carrying traffic, we feel that we are bound to get something like the results which our statistical figures show us.

President.—It means this that when you have carried out these improvements, you would come to a stage when you cannot rely on these sources of additional supplies and then only you will be in a position to know what your requirements are.

Sir Clement.—Yes.

President.—Can we officially use this information?

Sir Clement.—The position at the moment is we have not yet come to a final decision.

President.—The Government of India expect us to report by the 15th October. We have got several industries to report on and we hope we should be able to complete all our evidence about the 18th August.

Dr. Matthai.—When do you expect orders to issue in the ordinary course?

Mr. Parsons.—In the next two or three weeks we shall have to come to a decision as to what we are to do.

President.—Naturally if it was a question of bounties, it would be very important to know what the orders were going to be. If it takes the form of duty, then it doesn't very much matter. Except that the duty may have to go up if the production is to be on a smaller scale. The industry takes its chance. That is the position.

Mr. Mathias.—How far will the change in the standard of wagons affect this question?

Sir Clement.—We shall get our new standards put into use and tested as soon as possible. By the adoption of these new standards, we are not getting a very large increase in the carrying capacity.

Mr. Mathias.—Would you have your old types replaced by the central coupling type or would you merely convert the old wagons to the new type.

Sir Clement.—We should have to convert them, there are so many of them. It would be too expensive to replace them.

Mr. Mather.—I take it that you would not adopt this policy of conversion until you were approaching the date on which you expect to introduce the automatic centre coupling throughout. Are you likely to come to any decision in the next year or two?

Sir Clement.—I should think so. I cannot say exactly. We have got to do a good deal of experimental work.

President.—Do the figures of requirements apply to the whole of the railways including the metre gauge?

Sir Clement.—Yes. These are the requirements in the programme for 1927-28 as we have now revised it.

Broad Gauge.

47 Petrol and oil tank wagons.
47 Travelling cranes.
139 Bogie wagons.
156 Composite steel and wood wagons of special types.
170 Ballast wagons.

Metre Gauge.

1,226 Standard open and covered types.
50 Special type 4-wheel covered wagons.
51 Bogie wagons.
37 Composite wood and steel brake and tool vans.
494 Special types for the Burma Railways.

(1,226) are mostly for the South Indian Railway and the Madras and Southern Mahratta Railway.

Mr. Mather.—Is that for 1927-28?

Sir Clement.—Yes. We have got our wagon orders placed already this year.

Mr. Mather.—All the railways have sent us their estimates separately. They obviously have not taken this factor into account.

Sir Clement.—We are working on the basis of a five year programme which is revised every year. This of course will necessitate a large revision of our five year programme, but we consider every year 5 years ahead.

President.—Please send us a statement as soon as convenient explaining the position officially.

Sir Clement.—Yes, we will send it as early as we can.

President.—In your reply to question 13, you express an opinion that these people will have to import the components and you give some instances. As regards these, the evidence that is before us is that possibly except vacuum brakes and rivets, most of the component parts mentioned by you can be manufactured and are being manufactured in India.

Mr. Parsons.—I think we consulted Mr. Pitkeathly on this point and this was his opinion.

Mr. Wrench.—I think that all the wagon building firms are importing axle boxes. I don't think that they will dispute that. I know they can be made by Hukumchand's.

President.—It is a question of price. British axle boxes are more expensive than Continental axle boxes. So far as British axle boxes are concerned, there does not appear to be any very great difference between the British and local prices. The wagon manufacturers are importing Continental axle boxes because their prices are very much lower.

Mr. Wrench.—As a matter of fact, Continental steel castings are not as good as British castings.

President.—But the prices are very much lower.

Mr. Wrench.—They are.

Mr. Mather.—Since the arrangement for the inspection of these articles at the place of manufacture has been made, they feel more comfortable about buying them from the Continent.

Sir Clement.—The point about axle boxes is that they are not made here in the way in which they are made in Great Britain or on the Continent. They are rough castings. The wagon building firms have to do a great deal more of machining.

President.—They make an allowance for machining. They give a reduction.

Sir Clement.—Yes, they do.

President.—They can manufacture these things. If the competition from the Continent is not so severe, it is probable that they will be able to obtain most of them locally. That is roughly the position.

Mr. Wrench.—I don't think that the wagon building firms would like doing them. I don't think that they are laid out for the manufacture of these component parts. In the case of English castings no machining is required.

President.—That is comparatively a small difficulty. The whole point is that they can be manufactured and are being manufactured in the country.

Sir Clement.—I don't think that from what I have heard they are satisfactorily manufactured at present. The finished products are not turned out here in the same shape as the imported articles.

Mr. Mather.—In some instances the Hukumchand Electric Steel Works have had their castings machined under contract in order to enable them to supply the wagon building firms with the completed article.

Dr. Matthai.—Last year I think they had an order for 5,000 axle boxes from the East Indian Railway.

Mr. Wrench.—Yes. Then, again I don't think that anybody is making buffers of the I. R. C. A. type or screw couplings, or draw and buffing springs in the country.

Mr. Mather.—I think that the wagon building firms can make most of them, but they find it more profitable to import.

President.—They say that they can manufacture most of them anyhow.

As regards your reply to question 14, at present I take it that it is optional for the Company Railways to join the Railway Board in the matter of orders for wagons.

Sir Clement.—It is optional.

President.—I think that they have joined the Railway Board as far as I see.

Sir Clement.—In some cases, they have.

President.—I suppose that the Bengal Nagpur Railway is the most important exception.

Sir Clement.—They have a different type of wagons.

President.—By the standard type wagon, do you mean the I. R. C. A. type?

Sir Clement.—Yes, in the past.

President.—Excepting the Bengal Nagpur Railway, are there any other broad gauge railways that refrain from joining the Railway Board?

Sir Clement.—I don't think that there is anybody else.

President.—What is the position as regards metre gauge?

Sir Clement.—The Burma Railways make their own. The Bombay, Baroda and Central India Railway and the Bengal North-Western Railway also make their own wagons.

President.—These are the three biggest railways.

Sir Clement.—Yes. The Bombay, Baroda and Central India Railway produce the whole of their requirements. The Burma Railways prefer to build theirs in Burma. They prefer to build wooden bodies. They have got their extraordinary traffic in *nappie* (dried fish), for which nothing but wooden wagons will do.

President.—With reference to your reply to question 15: regarding the placing of an indent on the Director General, India Store Department, London, or the calling of simultaneous tenders for non-standard type wagons, would the simultaneous tenders be called for by the Railways themselves or by you?

Sir Clement.—By the Railways themselves.

President.—Does not the Director General also call for the tenders?

Sir Clement.—He calls for tenders in Great Britain and elsewhere.

President.—Does he not call for tenders here?

Sir Clement.—Not in India. He calls for tenders and places the orders there.

Statements submitted by the Railway Board.

President.—What do you propose to do as regards the details about the comparison of prices?

Mr. Parsons.—You mean whether we would like them to be published or not?

President.—Yes.

Mr. Parsons.—I think we will have to consider that and let you know.

President.—In our last enquiry the Tariff Board published the rupee prices in every case. In any case we must get the rupee c.i.f. prices otherwise there is no basis for any recommendation of any kind. For instance in Statement E on page 388 of the evidence on the grant of Supplementary protection you have given the rupee prices.

Sir Clement.—What is it exactly you want?

President.—There are two points; one is, in order to determine the measure of protection, if any, we must have the rupee c.i.f. prices in any case. Have you any objection to these being published?

Sir Clement.—No.

President.—As regards the comparison of these tenders you say that you don't want those to be published. If you look at the way they were worked out.

Mr. Parsons.—We have, I think, really given them more information than we should!

President.—There is hardly anything there that is secret, that nobody can find out.

Dr. Matthai.—Do you take the same line with regard to Statement VII?

Mr. Parsons.—It contains information which we have given in confidence to the Tariff Board. Our view is that it would be improper for us to give away the unsuccessful tenders, and inadvisable to publish the particular methods by which we convert sterling f.o.b. prices into c.i.f. landed prices.

President.—Look at page 145 of our last report. There the Tariff Board gave particulars about A-1 broad gauge wagon. The difficulty is this. As you are administering the bounty as between the lowest British and the lowest Indian tender, if they don't get correct information it makes their position difficult. In this case it comes to Rs. 100 more and they tender accordingly. You do not then get the lowest Indian price. If they knew exactly what the British price was in the previous year then they would tender accordingly but here they take the British price at a higher rate and quote Rs. 100 higher.

Mr. Parsons.—We expect a firm receiving bounty to tender at the lowest price which will give them a reasonable profit if their tender is accepted, in

which case I don't think they are really concerned with the foreign price. If they could cut down their price by an extra Rs. 100, and still get that profit, why did they not quote the lower price originally?

Mr. Mathias.—Their contention is that in order to keep their works going they have to quote a price which does not leave any profit at all.

Mr. Mather.—They cannot take the risk. Being confined to a single customer they are for all practical purposes confined to a single order. Their whole existence practically depends on one single order.

Mr. Parsons.—I find it difficult to see any support for their contention in the course which the market prices of their shares has taken.

Mr. Mathias.—A rise in the value of the shares would be with reference to the orders completed and prices obtained in 1925-26, and not necessarily with reference to the orders now in hand.

Dr. Matthai.—The fact that they have written down their capital has something to do with it, I think.

Sir Clement.—The real point you want to get settled is whether these people are to be given the exact formula which we are using in converting the sterling prices into rupee prices?

President.—It would be as well if the Railway Board could make them available.

Sir Clement.—Our objection is if we make these figures available now, they will see how we make a comparison and they will be in possession of these facts before they tender next time.

Mr. Mather.—He would still be left with uncertainty about the biggest factor of all which is the price quoted by the European manufacturer.

Sir Clement.—If the Tariff Board consider that it would be advisable to make that publication, at the moment we are unable to say yes or no. We will however let you know later. Does the Tariff Board consider it essential that these details should be published?

President.—There is constant criticism that these details are not published and they don't know how these calculations are made.

Mr. Parsons.—In addition to what Sir Clement has said, I may mention that we shall have to consider extremely carefully, whether we can publish details of the sea freight, because the special arrangements the High Commissioner has with the shipping companies at Home are strictly confidential.

Mr. Mather.—That is given by the North-Western Railway in the case of wheels and axles. In fact all these details that we are discussing here are given for wheels and axles in the volume we have published.

Mr. Parsons.—If they had not been asked to reply to you direct this would not have happened!

Mr. Mathias.—There is one other point. You are converting at 1*s.* 6 $\frac{5}{8}$*d.*?

Mr. Parsons.—It is very difficult to decide at what rate to convert sterling into rupees. We took the actual telegraphic transfer rate for the day on which the tender was opened.

Mr. Mathias.—One of the complaints was that the Government of India had notified that the conversion would be at the rate of 1*s.* 6*d.* whereas it was actually converted at 1*s.* 6 $\frac{5}{8}$ *d.*?

Mr. Parsons.—The rate of 1*s.* 6*d.* was subsequently adopted by the Industries Department because a large number of the transactions are transactions by individual officers who are not in touch with the exchange market, and some rate had to be laid down for their general guidance.

Dr. Matthai.—I find your erection charges on wagons have come down to nearly 40 per cent. since 1924. You are now allowing Rs. 250 for erection charges.

Mr. Parsons.—From Rs. 356.

Dr. Matthai.—In 1923-24 erection and landing charges, etc., were Rs. 356. In 1926-27 they are Rs. 250. What exactly is the point? Is there more riveting done on the parts imported?

Sir Clement.—We made an attempt to find out the actual costs of erection and we could not prove to our satisfaction that the same figure applied to every railway because of the difference in method, difference in the cost of labour and so on.

Dr. Matthai.—It is not a question of component parts now being imported in a more finished condition?

Mr. Wrench.—I don't know what it was in 1923-24.

Dr. Matthai.—On the coaching underframe your erection charges come to Rs. 261 against Rs. 250 on the wagon. I thought there would have been a bigger difference in that.

Mr. Wrench.—The underframes are completely erected. They are in two halves.

Sir Clement.—When that figure was challenged by Messrs. Jessop and Company, we sent an enquiry round to see what a fair mean would be. I think that the figure now given is a reasonable one.

Mr. Parsons.—In previous years I think we took a round figure for every type. I am speaking from memory, and am not quite certain.

Dr. Matthai.—In 1922-23 you gave a flat rate.

Mr. Mather.—It was challenged in 1923.

Mr. Parsons.—I think somebody challenged it, and then we went into it much more carefully. We got out erecting costs for each type of wagon, and tried to get exact figures.

Sir Clement.—In South Indian Railway it was not costing more than about Rs. 120.

President.—Is it not possible for the Railway Board in this particular instance of wagons to call for c.i.f. rupee tenders? Is there any rule which prevents you from doing it?

Mr. Parsons.—In my opinion, no. It is a question which should be put to the Government of India in the Industries Department.

President.—So far as the bigger question is concerned about rupee tenders generally I understand that is being considered by the Industries Department. So far as the Railway Board is concerned, is there any difficulty about that?

Mr. Parsons.—In my opinion there is no difficulty.

President.—I understand in the case of bridges for instance you can get quotations for bridge erected by a British firm. If that was done in this case there would be no difficulty.

Mr. Parsons.—Whether it is wise is a different thing. It would certainly relieve the Railway Board of a good deal of troublesome work if we called for rupee tenders and had not all this comparison business to do.

Sir Clement.—A bridge is quite a different thing. In such cases a British firm would tender for the cost is considerable and they can send out their own men to see to the erection of it. In the case of wagons there would be difficulties in doing this.

Mr. Mathias.—In the case of underframes it is quite impossible, the orders being very small.

Sir Clement.—I should think so.

Mr. Parsons.—I very much doubt whether it would pay a firm to send out a representative on a small order.

Sir Clement.—May I make an important point? I am certain that the firms were told at the time they tendered that the exchange would be taken as the T. T. rate on the day of opening the tenders. If they say they were not told, I think they are not correct.

Mr. Mathias.—They do not definitely say that they were not told. What they referred to was a statement in the Indian Trade Journal that the exchange would be taken at 1*s.* 6*d.* to the rupee and then they pointed out that it was actually taken at 1*s.* $6\frac{5}{32}d.$?

Sir Clement.—We took good care to tell them beforehand what rate would be taken.

Mr. Parsons.—The firm that complained against this knocked the basis out by adding that they got the order.

President.—We should like to be relieved of this constant enquiry into the matter of comparison by the publication of these figures. Every time the question comes up, we have got to hold the same enquiry.

Mr. Parsons.—If we agree to the publication of the total of these additions without details, would that meet the Board?

President.—The total you have already in the c.i.f. price. This figure about erection is rather important.

Mr. Mathias.—That should be separated, since the Customs duty is calculated on the price without erection charges.

Mr. Mather.—As you have given us the erection coupled with landing, wharfage and port charges which form an appreciable proportion of the whole we cannot say what it costs you to erect.

Sir Clement.—We will consider that point and let you know a little later.

Continued on 28th July 1926.

The future requirements of railway wagons.

President.—I should like to refer again to-day to the question of the future requirements of wagons. I think you told us yesterday that there were only some special kinds of wagons to order.

Sir Clement.—Yes.

Mr. Parsons.—Broad gauge 573, metre gauge between 1,200 and 1,300 ordinary types and a certain number of special types.

President.—Is there anything in these special types which makes it impossible for Indian manufacturers to build them apart from the question of price?

Sir Clement.—Not impossible, but I don't think it would be profitable for them to undertake the manufacture of these special types.

President.—There is one point we have got to consider. It would be rather a pity if those people who specialised in wagons were to close down. There would be no alternative left if there was no market for wagons. We are trying to consider whether there was something to keep them going until the railways were in a better position to see their way to ordering more wagons. You think there is really nothing very much to keep them going.

Sir Clement.—The metre gauge gives them an opportunity.

President.—I am trying to estimate, eliminating for the moment the question of price, whether there was sufficient work to keep them going.

Mr. Parsons.—1,250 metre gauge wagons will not keep them going.

President.—I am sure that the Railway Board would not like to see the works closed down.

Sir Clement.—Not at all.

President.—We are just considering whether during the interval whilst you are getting up your figures, we should recall the wagon manufacturers and ask them whether they could build these special types.

Mr. Parsons.—I would rather you took no action until we have finally decided what to do.

President.—Before we write the report, we must be able to see what the position is.

Mr. Parsons.—By the 24th August we should be able to suggest something.

Mr. Mather.—We could not call them much before that date.

President.—In fact we have no date available before the 17th August.

Sir Clement.—Please don't give them any indication before you hear from us.

President.—We have been considering since yesterday this question. This is the most serious point that has developed since we started this enquiry. If a way could be found during the interval to keep the industry alive it would be convenient for all parties concerned.

Sir Clement.—I think we are just as anxious as the Tariff Board to keep the industry alive.

President.—We quite realise that. Perhaps you would let us know later on.

Sir Clement.—We will let you know.

President.—You know better than we do what would keep these people going.

Sir Clement.—Yes.

President.—As regards the other two firms, they have got engineering work and they might be able to tender for underframes.

As regards the question of the bounty, according to your note, the way it is worked is this. It simply means adjusting the extra cost to the railways. Is it not so?

Mr. Parsons.—That is so; it is in accordance with the scheme originally put forward by the Tariff Board.

President.—I don't think I would agree with you on that point.

Mr. Parsons.—This is what you said—" The Indian firms would tender subject to the bounty within the limits fixed. If, for example, in the first year the bounty was payable on 800 wagons of the A-1 type and the lowest foreign tender was Rs. 3,800 the order would be given to the lowest Indian tender provided the price was not higher than Rs. 4,650. Subject to the bounty, therefore, the Indian manufacturer will compete against the foreign manufacturer."

President.—The wording perhaps was unfortunate. The idea was that you were to declare the amount of the bounty and they would then take that amount into account in tendering and compete against the world. Would it matter to the Railway Board if the bounty was administered on that basis?

Mr. Parsons.—Were you to fix the bounty at say, Rs. 350 and they knew that the bounty was Rs. 350 they could cut down their prices.

President.—What I mean is that they will get the whole of that bounty and they will quote accordingly.

Mr. Parsons.—That is, exactly the same as you did in the case of the steel bounty? It would be very much easier for us to administer than the present system. It would be easier to administer a bounty on those lines than on the lines on which we are now administering it.

Dr. Matthai.—The present system involves an element of guarantee of orders.

Mr. Parsons.—I think the note we sent in is a correct statement of the effect of the bounty. If you look at paragraph (*iv*) (*ii*) this is what we said—

> " It is not like the bounty on steel rails, a fixed sum paid on output to fulfil orders which the firms have succeeded in securing; and does not, therefore, like the bounty on steel rails, merely act as an aid to the firms to quote a fine price, leaving them still with the risk of failing to obtain either the order or the bounty, if they do not quote fine enough. The bounty on wagons is merely a monetary limit within which the Railway Board are permitted, and indeed enjoined, to ignore the ordinary Stores Purchase Rules, with the knowledge that up to this limit they will recover any extra expense to which they may thereby be put by a contribution to railway revenues from the general tax-payer. Under this system, the Indian wagon industry as a whole stands no risk of failing to obtain orders."

The system we are working means that they should invariably get an order.

President.—They have all asked for the imposition of a duty. One firm say definitely that if a duty were imposed it would take its chance.

Sir Clement.—The difficulty is that they have not finally declared that they are prepared to take their chance. That is the inherent difficulty here, where there is one consumer.

President.—To some extent it can be got over. Supposing they were underquoted by the foreign manufacturer. Then you say " here is a lower price, are you prepared to take it? " and give them a sort of second chance.

Mr. Parsons.—I don't think that under any circumstances the Railway Board could agree to do that. Our name would be mud in every market of the world.

Sir Clement.—They have been getting a certain number of wagons. The bounty scheme does not prevent them from getting orders. As it is administered it makes it certain for the Indian manufacturer to obtain orders. We

have to face the position that where the capacity of the Indian firms is in excess of what we consider our own demand, we run into the difficulty of not being able to call for simultaneous tenders. We cannot carry on a regular practice of calling for tenders abroad because we should be infringing ordinary commercial practice.

President.—I was of course assuming that the position was as it was before, namely, that there was a certain number of wagons, orders which you can place abroad. Under those conditions would there be any difference between your present practice and the practice we are suggesting?

Sir Clement.—If the measures which the Tariff Board recommended and the Government accepted are to put the industry on its feet eventually, it must result in their being able to produce all the wagons we want.

Mr. Parsons.—Supposing a duty instead of bounty were imposed and even so the lowest satisfactory tender *cum* duty was a foreign tender, could the Railway Board then call up the lowest Indian tenderer and say " will you take the order at that price "?

President.—I don't suggest that. That point was put to the applicants and they said—I am quite sure Jessops said—that they were prepared to take their chance.

Mr. Mathias.—If your demand is below the supply in India there would be no particular difficulty, I mean your orders would not be placed abroad because competition out here would keep prices at a satisfactory level.

Sir Clement.—The contrary of course would happen at once, and we should be absolutely in their hands as regards price, if by combining they managed to get not merely a reasonable business profit but the whole bounty. That would be looting.

President.—The assumption is that there would be no bounty.

Mr. Parsons.—If their output was, say, 4,000 and our orders were for 3,000 and we could not therefore call for simultaneous tenders, what is more likely to happen is a combination of the Indian firms than competition between them.

President.—Supposing you found that was happening, you could easily punish them by not accepting any tenders.

Mr. Parsons.—They may combine.

President.—You are not bound to accept the lowest tender. If you found that there was this immoral combination.

Sir Clement.—I don't say immoral. The real practical point is that we, that is Government, would never be in a position to say that no orders will be placed in India in a particular year, because there has been a combination to give prices. We should in practice be bound to place orders with the Indian firms, I think.

Mr. Mathias.—Would it not be possible to say that unless you reduce your price by, say, Rs. 200 there will be no orders in India?

Sir Clement.—They will quote any price you like and look to the Tariff Board for the rest. I am just looking at the practical possibilities.

President.—Supposing this industry is to be encouraged in the country, what safeguards would you suggest?

Sir Clement.—I don't think I have any advice to give on this particular point. That has to be faced, this question of combination, under any system of protection.

President.—This is really the crucial point.

Sir Clement.—I am afraid you get back to the old difficulty that there is only one consumer. I am afraid it is an inherent difficulty in any protection that is given.

Mr. Mather.—And it is more so because in this case the bulk of the orders, unlike the rail orders, do not come in different instalments.

Mr. Parsons.—Would you consider the position easier if we were to call for tenders, say, three times a year?

Mr. Mather.—That does not necessarily follow. I am not suggesting that this should be done. I simply want to make it clear that the difficulty that exists in connection with the wagon industry does not necessarily apply to the other kinds of articles of which the railways are the only consumer.

Sir Clement.—I don't think there is very much difference, because we are getting more and more to the point of pooling our rail orders.

President.—As regards the publication of the amount of the bounty I think Mr. Parsons claims that he got a better price by not publishing the amount of the bounty?

Mr. Parsons.—What I said was " The only way to avoid the risks is to keep the firms engaged in the industry guessing." Then they may quote a price to us which might be lower than it would otherwise have been.

President.—It does seem to me that these people in 1925-26 got a much better price by not knowing the figures. What happened was this. The Peninsular Locomotive Company quoted Rs. 3,805 and I think the Indian Standard Wagon Company Rs. 3,825 and you gave the order for Rs. 3,800. At that time they had no information because nothing had been published and apparently they kept themselves more or less on the safe side.

Mr. Parsons.—May I explain to you exactly what happened that year? What happened was that, except the Peninsular Locomotive Company, the Indian tendering firms did not tender within the conditions on which tenders were called for. For A-2 wagons the lowest Indian tender was that of the Peninsular Locomotive Company at Rs. 3,898, but none of the remaining firms put in a straightforward tender. They attempted to throw exchange risks on us by quoting on a basis of 1s. 4*d.* for imported material, and offering adjustment of the price in accordance with the rate actually ruling when shipments were made. Messrs. Burn and Company and the Indian Standard Wagon Company also said that Rs. 40 must be added to their quotations, if we did not pay in advance as the work progressed. I attempted to discover what allowing for these adjustments their quotation would be, and worked it out as Rs. 4,093. What we then actually did was to accept the Peninsular Locomotive Company's tender, but it was for 215 wagons only. They had also tendered for 125 C-2 wagons, but we thought it would suit them just as well, if not better, if instead of accepting their tender for these C-2 wagons we gave them a further order for 125 wagons of the A-2 type which they were already building. We therefore did so, and in addition we decided to take from them a further 140 A-2 wagons in order to obtain the 480 A-2 wagons which we required. They thus got an order for an extra 265 A-2 wagons instead of an order for 125 C-2 wagons. Their tender price for C-2 wagons was Rs. 3,805, and we placed an order for the 425 C-2 wagons which we required with the Indian Standard Wagon Company at this price, by negotiating with them after we had rejected their tender.

President.—That is Rs. 3,800.

Mr. Parsons.—Yes.

President.—But the impression that I have gathered is this. They got this price of Rs. 3,800. The Peninsular Locomotive Company quoted that figure, because they thought that the difference between their quotation and the lowest British tender would probably be the amount of the bounty. Their costs including profits would be very much under Rs. 3,800. We are going into the question of costs. We have not come to any definite conclusions, but I think I am right in saying that it would be substantially below that figure.

Mr. Parsons.—I have some reason to suspect that the Peninsular Locomotive Company's last tender was not a true tender. I don't think they wanted the order. You yourself, I think, said so.

President.—When they know the prices likely to be received by the Railway Board they feel that it is necessary for them to quote as near those prices as possible and therefore I think you get your prices very low. I may be quite wrong. If I was tendering, I would certainly be guided by the quotations that

are likely to be received to be quite safe. I think they probably made some profit about which you were talking yesterday.

Locomotives.

President.—As regards locomotives, I think we gave in the 1923-24 enquiry, our views on the general question as to whether locomotives should be protected or not. We went as far as to say that it was an industry that should be protected and then we came to this difficulty, *viz.*, the number of locomotives that the railways were likely to require. But since then the position has altered slightly, in that the Peninsular Locomotive Company are now manufacturing wagons and in conjunction with that they want to build locomotives if they get any orders. Therefore the unit that we took then of 200 may not now be required as an economic unit. The first thing I should like to know is the market for locomotives in the future. Here also you are making some alterations in the types.

Sir Clement.—I think we explained that in paragraph 4 of our letter. At the present moment orders are being placed in England for the first sample lot of the new types of locomotives which we are proposing to introduce. Our procedure will be to get those locomotives out here and test them thoroughly for perhaps a year, and in the course of the test we might find some modifications required in the standard, and only at the end of it should we be in a position to place further orders of any size. That of course makes it very difficult for us to make an estimate of the number of locomotives required in the future. Our improvements in working are necessarily having the effect of putting us in a position of being perhaps not overstocked, but well stocked with locomotives. There is no doubt that some of the improvements we are making will give us very much more duty from the existing locomotive stock and put us in the position of being possibly overstocked. The various factors are so complicated at present that I don't think we would be justified in putting up estimates of our consumption during the next few years.

President.—Will these new types that you are contemplating, more or less replace the old types entirely?

Sir Clement.—In time, yes. As we go in for renewals they will be replaced by new types.

President.—How many new types are there going to be?

Sir Clement.—5 broad gauge and 5 metre gauge.

President.—Of course if locomotives are to be built in this country, they will have to confine themselves more or less to one or two types.

Sir Clement.—Yes, I suppose so, but of course we can't confine ourselves to one or two types. 5, I think, is the minimum that we can possibly do with. Probably there will be 7 altogether.

Dr. Matthai.—What do you call programme railways?

Sir Clement.—It means railways which come into our budget.

Dr. Matthai.—How much of the total mileage would that mean?

Sir Clement.—Practically all except the Bengal and North-Western Railway and H. E. H. The Nizam's Guaranteed State Railway.

Mr. Parsons.—And some branch lines. But for any general purpose you may take it that about the whole mileage is covered.

President.—You have investigated to some extent this problem of manufacturing locomotives in this country. Have you formed any opinion on that point?

Sir Clement.—We have not made a very complete examination of it. We sent you Mr. Chase's report showing the results of his investigations in England. We also made some investigation into the question of building locomotives in the Ajmere workshop. In the Bombay, Baroda and Central India Railway workshop they have been building locomotives for some 30 years.

President.—I think they build 15 locomotives a year.

Sir Clement.—Yes.

President.—They have given us some very good information about costs and other matters.

Sir Clement.—They have given us their costs quite recently, and we are having them analysed. But we are not by any means prepared at the moment to say whether they are complete or entirely comprehensive. Of course their problem is entirely different to the problem of an isolated works, such as the Peninsular Locomotive Company, because they carry on the manufacture of locomotives alongside their heavy repair work, and very largely the same machines, the same plant, the same workshops are available for both classes of work. The rebuilding or overhauling of locomotives is very similar to the work of building and they are able to spread their overhead costs over the whole of their repair and manufacturing work. I don't think any very accurate deductions can be made from them.

Mr. Mather.—If locomotives were manufactured in this country by a private firm, would you regard as out of the question that they should also do the repair work for the railways?

Sir Clement.—I think it would be practically impossible to get that done satisfactorily. Repair work must be done by the Railway Administration.

Mr. Mather.—The repairs are sometimes done by private firms in England.

Mr. Wrench.—I don't think so, except just after the war.

Mr. Mather.—More recently than that.

Mr. Wrench.—They got orders just to keep them employed. Can you mention any case?

Mr. Mather.—I know of a case last year.

Mr. Wrench.—What firm? Do you know?

Mr. Mather.—I do not know whether I am at liberty to say. But I know that they got quite a big contract.

President.—It would take some time I suppose before you are ready to order your new types on any large scale.

Sir Clement.—It would take some time.

President.—In the meanwhile railways would require some.

Sir Clement.—We don't propose to buy many more until we get our new types.

President.—Does that apply to all the railways?

Sir Clement.—I don't think that any railways will be purchasing. The Assam-Bengal Railway and the Burma Railways have got some special types which they may order.

President.—The Company-worked railways are coming into line as regards these new types?

Sir Clement.—They are co-operating with us except where they have got special conditions.

President.—Is the Assam-Bengal Railway metre gauge?

Sir Clement.—Yes. It is just as well to say that the Peninsular Locomotive Company would not be in a position—and I think they will admit it themselves—to take orders for locomotives at once. Mr. Wrench is going to see the Peninsular Locomotive Works, but the information that we have regarding their equipment, lay out of the machinery and plant leads us to think that they could not undertake an order now for building locomotives without considerable preparation and delay.

Mr. Mather.—I believe that is correct.

Sir Clement.—We examined the matter very carefully and we found that they have not equipped their workshops.

Mr Mather.—They never contended that they had completed their equipment.

Sir Clement.—I think you will find that a great deal of the equipment which they have got is not suitable for locomotive building at all.

President.—So far as last year was concerned, I understood that some tenders were called for locomotives.

Sir Clement.—We did call for tenders in Great Britain.

President.—Was that for next year?

Sir Clement.—Yes. Orders have just been placed.

President.—You say so far as you can tell us at present you are not likely to place any orders.

Sir Clement.—I would not like to say that definitely but I don't think we shall place any orders to a large extent.

Mr. Parsons.—The orders placed this year are for proposed new types which must of course be built under very careful inspection. We have to try them before we decide finally to adopt them or not.

Mr. Mather.—Even if the Tariff Board decided to recommend protection for the locomotive industry and Government accepted such a recommendation that would not become known until the report was published, presumably early in 1927. It is, I think, axiomatic that the Peninsular Locomotive Company would take no steps to equip themselves further for locomotive manufacture until they saw something of that kind done and therefore they would not claim to be in a position to deliver locomotives until the year 1928-29. That is really the year from which we should be interested in the possible demand.

President.—These orders that you have placed in Great Britain are for delivery in 1927-28.

Sir Clement.—The first lot would actually arrive in the country in 1927-28.

President.—All these are new types.

Sir Clement.—Yes, 5 types of broad gauge and 5 metre gauge types.

President.—Have you included metre gauge engines in the 93?

Mr. Wrench.—73 broad gauge and 20 metre gauge.

President.—On an average about 10 of each type?

Mr. Wrench.—They vary.

President.—I thought I understood Sir Clement to say that the railways would naturally require some time to see how these locomotives were doing before deciding on the exact types.

Sir Clement.—If they arrived in April 1927, it would not be until towards the end of that year we would be able to decide whether we should adopt them.

Mr. Mather.—That gives us at least 18 months from now.

Sir Clement.—We might consider it necessary to order a few more in the meantime, but I don't think they would amount to very many.

President.—I suppose that this is a sufficiently large number to enable you to distribute them over the various railways to see if they were suitable types.

Sir Clement.—Yes.

Mr. Mather.—That gives an interval of about 2 years.

President.—To that extent you will have reduced any surplus that you already have.

Sir Clement.—Not necessarily.

Mr. Mather.—One presumes that the engines that you have still continue to become unserviceable.

Sir Clement.—We never let them become unserviceable.

Mr. Mather.—They may reach a stage when it is no longer economic to run them alongside of new engines.

Sir Clement.—I think you are right in what you say.

Mr. Mather.—My point is that at the end of 2 years the potential demand is likely to be more substantial than it is at the present moment.

Sir Clement.—It is very difficult to put a figure to it. We may find, that we can carry on for a long time without buying very many new engines. Electrification affects the question, and on the Bombay side it is throwing out 100 or 200 engines.

Mr. Mather.—Over and above those already put out of use?

Sir Clement.—Yes.

President.—Will they be carrying electrification as far as Poona?

Sir Clement.—Yes, in two years or so.

President.—I think that this is a very important point.

Sir Clement.—We have ordered 93 engines and until we have tried these out we are not likely to be on the market.

President.—That is to say till October 1928-29 you would not be able to declare what your requirements were going to be. Is that the position?

Sir Clement.—Yes.

President.—I take it that your statement regarding new types applies to broad gauge as well as metre gauge.

Sir Clement.—Yes.

President.—In that case you would not have any large orders to give.

Sir Clement.—No.

President.—In Statement II you have mentioned the types and also quoted prices against them. Are they the same types as those mentioned in Statement I?

Sir Clement.—I think that is right.

Mr. Mather.—Are you bringing out locomotives complete?

Sir Clement.—We have done so in the past.

Mr. Wrench.—I don't think that the railways are finding it cheaper to bring them out complete.

Dr. Matthai.—Has there never been a case of a locomotive manufactured at Ajmere?

Sir Clement.—They have been manufacturing locomotives there for the last 30 years.

Dr. Matthai.—You make a statement that no locomotives are being made in State Railway Workshops?

Sir Clement.—Yes. The Ajmere workshop is not a State-managed Railway workshop.

Steel Sleepers.

President.—You said that you would like to make a statement on steel sleepers?

Mr. Parsons.—We want to tell you of a transaction of considerable size which we have entered into. At the end of last month or the beginning of this month, we received telegrams from the Director General of Stores in London and from Sir Atul Chatterji, the High Commissioner, informing us that an international ring, which had been formed to control steel material for railways, had raised the price already by about 30 shillings per ton and that there was an expectation of the price going up still further. But the Director General of Stores had an opportunity of placing an order at the pre-rise price for not less than 50,000 tons and up to 100,000 tons of steel sleepers. The pre-rise price for steel sleepers was £6-17-6 to £7 a ton and the latest quotation which the Director General of Stores had had after the operations of this ring had commenced, was £8-7-6 a ton. We were not aware at the time we got this news exactly how many tons of steel sleepers were wanted for next year's consumption, but we discovered within the course of three or four days that we wanted something over 100,000 tons.

President.—How many years requirements are those?

Sir Clement.—The requirements are purely for next year.

Mr. Parsons.—May I explain the position? It is our wish, if possible, to keep the Indian Steel industry going by giving orders to it purely in the normal way of business and I therefore on this occasion, though it may not have been entirely in accordance with commercial practice, telegraphed to the Tata Iron and Steel Company telling them that we had got this offer at the pre-rise price, and asking them if they would quote. Their reply was that at present they could set aside up to 25,000 tons for steel sleepers, that they would be very glad to take an order at such price as Government considered suitable after considering the recommendations of the Tariff Board, and that their costs were as given in a letter to Sir Charles Innes, and so on. I may add that a price of £7 a ton represents landed *cum* duty just under Rs. 120; and we should probably have been prepared to place the order with Tatas at Rs. 125 a ton; since under the Stores Purchase Rules, this price could be considered not unfavourable. As they refused to quote, we placed the order abroad. I have since heard that as a matter of fact the foreign firm will probably not be able to deliver more than 50,000 tons, but there seems to be a chance of getting the balance from another firm.

Mr. Mathias.—The railways are adopting a standard type of sleepers but they are still wavering which kind of sleeper they would adopt. Is that the position?

Sir Clement.—I notice in the Tata Iron and Steel Company's memorandum on steel sleepers that they have made a particular point about their difficulties because there was no standard adopted for sleepers. They probably heard that we have been endeavouring for the last few months to get a standard for steel sleepers for State Railways and they assumed that there had been some difficulty. As a matter of fact there has been no difficulty except that we have not yet decided on the best design. But that does not really affect this question at all, because they know perfectly well that the railways have been using a type of sleepers which for the moment you might call a standard type, used nearly everywhere, and which they have been supplying to the Bombay, Baroda and Central India Railway and which other railways also have been using. It is pure wrangling.

Mr. Parsons.—May I add one word? As regards this order I was careful to explain to the Tata Iron and Steel Company that though the type we required might vary slightly from the type that they had already been supplying to the Bombay, Baroda and Central India Railway, it would not be more expensive. There was no question therefore of their not knowing what their costs were likely to be.

President.—Would you mind giving us the figures?

Mr. Parsons.—I understand that the Director General of Stores has since placed an order for 50,000 tons at £6-10-0.

Mr. Mather.—Is that f.o.b.?

Mr. Parsons.—Yes.

President.—What is the price now?

Mr. Parsons.—The price he told us was £8-7-6 and we had a certain amount of independent evidence of a rise to this extent.

Dr. Matthai.—Is that the combine price?

Mr. Parsons.—I don't know.

Dr. Matthai.—Have you any information whether this combine has actually come into existence?

Mr. Parsons.—Only that the price has been raised.

Mr. Mathias.—In the event of protection being given to steel sleepers, to what extent would a rise in the price caused thereby induce consumers to substitute wooden sleepers or any other kind of sleepers?

Mr. Parsons.—If you put a very heavy duty on steel sleepers, you may make it worth while for anyone to substitute wooden or cast iron sleepers for them.

President.—Is it the position of the Railway Board that wherever possible they would use steel sleepers where they are using other sleepers now?

Sir Clement.—No. We have got three main forms of sleepers, timber, cast iron and steel. The question of freight comes in a good deal and obviously it is advantageous to use wood in the neighbourhood of the forests and it is advantageous to use cast iron in the neighbourhood of cast iron production, coalfields and so on, and steel sleepers at the ports, and we have, on each occasion, when sleepers are required, to consider which should be used at the price which we are going to pay. There are also certain other factors which come into play. We don't as a rule use anything but wood on new construction, non-consolidated banks and so on. Further, there are certain places in India where steel sleepers are found to decay very rapidly, for instance, where the soil is salty near the sea. All these factors have to be taken into consideration so that there is no fixed policy of using only steel sleepers or entirely cast iron sleepers or wooden sleepers. It is subject to local restrictions. Our policy, as far as the State railways are concerned, is to use the most economical thing in particular places. If wood prices go down to a great extent we would use more wood.

President.—As far as I could gather, speaking from memory, Tatas are not at present in a position to manufacture sleepers on a large scale because they have not got the steel.

Sir Clement.—They say their plant is equipped for 5,000 tons but they have provided in their development programme for the installation of additional presses which will raise the output to about 25,000 a year.

President.—But I think in the oral evidence Mr. Peterson admitted that until their output of steel increased considerably they cannot do that.

Sir Clement.—It would be very discouraging for us. If I may put it to the Tariff Board, we have been trying a good deal to establish the steel industry in India, but it is very discouraging for us that a firm like Tatas will not work on business principles. Here is a million pound order and they treat it with contempt. It is not really business. Their excuse is that they have not got much steel to spare. This is one of the greatest opportunities that the Indian steel industry ever had, and they say their plant is laid out for only 5,000 tons. Obviously if they installed additional plant they could produce these steel sleepers more cheaply. It is very discouraging for us to know that we are bound down to what may be considered a very unfair mode of tendering. They set down any price and say 'we will get the rest out of the Tariff Board'. It is coming to a point where it knocks the bottom out of any protection you give. We cannot get down to business if we quibble.

Mr. Parsons.—I should like just to add that we are now going in for a big programme of development which involves much relaying and new construction.

Mr. Mather.—You said an order has already been placed in Europe for 50,000 tons. Do I understand that an order for a further 50,000 tons is under consideration, making a total of 100,000 tons?

Mr. Parsons.—We hope so.

Mr. Mather.—For how long do you expect that to meet the requirements of the State-managed Railways?

Sir Clement.—For not more than a year.

Mr. Parsons.—This is for our next year's programme.

Sir Clement.—We are undertaking a big construction programme involving something like 6,000 miles of new line and I hope in the course of the next two years at any rate to work up to something like 1,000 miles of new track a year. That is a great factor which is going to increase the consumption of sleepers, wooden, cast iron or steel.

Cast Iron Sleepers.

While on the subject may I just mention something about cast iron sleepers? We have had recently to call for tenders for cast iron sleepers and the result of those tenders was that we were enabled to place a certain number of orders with Indian foundry firms. But the point that was brought prominently to our notice was that on the present prices of pig iron in the country they cannot submit competitive tender prices with English prices. They informed us that the Indian price of pig iron now is something like Rs. 60 a ton and the price of cast iron sleepers which they were up against was, I think, Rs. 92 per ton delivered Karachi. I gather that really corresponds to a pig iron price of Rs. 45 within a very small margin. The Tata Iron and Steel Company say that their cost of pig iron is something like Rs. 27 and they are selling it abroad at a very much lower price than Rs. 60. The net result is that they are dumping it at a very much lower price than they will sell to people in India. That is hampering the foundry firms. The Indian foundry firms who make cast iron sleepers cannot compete against English firms because of the high price of pig iron in India. Incidentally, apart from dumping, it affects one of our own industries.

President.—They say that the internal price is regulated by the foreign price. Take the case of English rails for instance. The export price is lower than the home price.

Sir Clement.—In this case they did not make our steel sleepers and at the same time prevented cast iron sleepers from being made in the country. That is why we have to buy cast iron sleepers as well as steel sleepers abroad. That is a very unsatisfactory position.

Dr. Matthai.—1,000 miles of steel sleepers, how much would that mean in tons?

Mr. Wrench.—About 142,000 tons.

President.—I think it would be very useful if we could put the information that you have just now given to the Tata Iron and Steel Company.

Mr. Parsons.—I put it all down in a memorandum for the Railway Standing Finance Committee and after I return to Simla I will send you a copy.

President.—We are going to Jamshedpur next week and it would be convenient if you could put that in before we leave so that we might ask Tatas about it.

Steel Castings.

President.—We have received applications from both the steel castings people and the engineering firms which manufacture forgings and component parts of a wagon. As far as I recollect throughout our tariffs there has been the same duty on rolling stock as there has been on the component parts?

Mr. Parsons.—I am afraid I cannot say off hand.

President.—If we make any recommendation for the protection of wagons, by means of a bounty and if we came to the conclusion that the component parts should also be manufactured in the country, there can be no question of giving any bounty on the component parts, because it is an impossible proposition. The bounty on wagons may have to go up in proportion if we increased the duty on the component parts. To that extent the cost of building a wagon would go up. The evidence that we have received so far does tend to show that they can manufacture most of the forgings and component parts.

Mr. Wrench.—I think in the case of the Indian Standard Wagon Company they do manufacture all their forgings, don't they?

Mr. Mather.—Very nearly all.

Mr. Wrench.—We think that they can produce them cheaper than they can import them.

President.—They say they don't produce them cheaper, because they have got to use protected steel. The foreign manufacturer doesn't use protected steel. To that extent the Indian manufacturers would be at some disadvantage.

Mr. Wrench.—But I cannot believe that the Indian Standard Wagon Company would manufacture parts if they can buy cheaper from abroad.

Mr. Mather.—A fairly big proportion of the cost of the forgings made in their own workshops is overhead expenses. Their view is that on the whole since they have installed their plant for making these forgings and have got the supervising staff, they are perhaps no worse off by continuing the manufacture, but if it were considered as a separate proposition or as a new thing, it would not pay them at the present price of imported forgings.

President.—They gave us the impression that they could manufacture forgings and that they manufactured them very well. One of their complaint is this that the cost of steel has gone up. For that reason they are at a disadvantage.

Mr. Parsons.—That is the general complaint of a good many firms.

Sir Clement.—May I ask whether the evidence given by the Indian Stores Department's representative was to the effect that these people could make forgings and castings of the same standard as the imported article?

President.—As regards the forgings I think the opinion was that they were up to that standard. As regards the castings, the opinion was that the quality was satisfactory, but that as regards general finish they did not compare very favourably.

Mr. Wrench.—That adds very much to the cost of the finished article.

President.—We did not go into the question of the cost with the Controller of Stores. Apart from the question of cost they said that the only thing was they were not nicely finished. Chiefly it was a matter of appearance and it did not interfere with the use for which the castings might be put.

Mr. Mather.—That was apart from the question of extra cost of machining.

President.—Of course we are going into the question of cost. Apart from that is it your opinion that castings cannot be manufactured in this country which may be of use?

Mr. Wrench.—We have had distinctly good castings from Hukumchand's.

President.—They are the principal applicants as far as castings go.

Sir Clement.—They are the only people. There again we have an industry which depends entirely upon railways.

President.—As regards the question of inherent difficulty to which we refer in the questionnaire, in making these castings, is there anything in the nature of the raw materials for instance or the nature of the skill involved in manufacture?

Mr. Wrench.—No inherent difficulty. Some of the best castings manufactured are produced from electric furnace steel.

President.—We have again gone into the question of raw material. Last time we had not sufficient evidence. This time we have sufficient evidence that there is plenty of scrap of the kind that they require.

Mr. Wrench.—Do they get it from Tatas?

President.—They don't get it from Tatas. They get it from the railway workshops. They are getting it cheaper than they got before. In their case I think the main competition is from the Continent at present. So far as English prices are concerned, they are not very far behind, but as regards the Continent there is a difference of about 50 per cent. British castings are Rs. 28 and the other Rs. 14.

Dr. Matthai.—Have you any information on this? Is the electric process supposed to be too expensive for these castings?

Mr. Wrench.—It depends on the size. It is probably cheaper to make small castings with electric furnaces.

President.—As regards axle-boxes you say that articles such as steel axle-boxes are very difficult castings. Anyhow they have been making axle-boxes in considerable quantities.

Mr. Wrench.—They have been making them, but they have to be machined. In the case of English castings, it requires no machining at all, except possibly on the face plate joint.

President.—Apart from that there are no difficulties.

Sir Clement.—The fact that you have got to machine them is a difficulty.

President.—They are getting them machined outside and they say that they are going to install machinery for machining in their own works.

Mr. Wrench.—If they could supply castings machined, it would relieve the purchaser of having to do any further machining. So far as the quality of the steel is concerned, it is up to our requirements. Of course it makes it much more expensive if the producer has to machine the castings.

President.—Is it due to unskilled labour? What do you attribute that to?

Mr. Wrench.—Axle-boxes are extremely difficult castings, and require to be made to close limits so as to take the brass. The brasses are a standard size, and if the castings are not accurate, the brass won't fit.

Sir Clement.—Primarily of course due to the want of skill in the foundry itself.

President.—That of course is due to the fact that they have not had very long experience. They might be able to get over that.

Then as regards the market for castings, is the automatic centre buffer coupler a casting?

Mr. Wrench.—This is an extremely difficult casting—even more so than in the case of axle-boxes.

President.—If you were to adopt these couplers they would require considerable quantity of castings, would they not?

Mr. Wrench.—Yes, we should require very large numbers of steel castings.

President.—You have not yet arrived at any decision as to what you are going to do on this point.

Mr. Wrench.—Not yet.

President.—But I understood you to say in connection with wagons that you were building these new types of wagons in order to be able to use automatic centre buffer couplers.

Mr. Wrench.—When it is decided to change over to the automatic centre buffer coupler, we shall not have to make any structural alterations to the underframes of the new types of wagons. Whether that will come about next year or 10 years hence we cannot possibly say at present.

President.—It may be easier for you if and when you make up your mind. You have not yet arrived at any decision.

Sir Clement.—We have made up our mind that we are going to have them when we can afford to finance them, and as soon as we are satisfied with the results of the experiments that we are making. We would not like at the moment to put a date to it. Obviously all the new wagons that we buy will be constructed in such a way as to take the central couplers eventually.

President.—Are you still using any cast iron axle-boxes?

Mr. Wrench.—There are a few in service, I think. The Bombay, Baroda and Central India Railway still retain cast iron axle-boxes on their coaching stock. I don't think they have any intention of changing over.

President.—The number required would be relatively small?

Mr. Wrench.—The number required for coaching vehicles is comparatively small. So far as the Great Indian Peninsula is concerned, they have completed the change over from cast iron to steel axle-boxes, and I think you will find that the majority of the railways are completing or are half-way through their programme.

Dr. Matthai.—Supposing the steel castings became more expensive, there might be a tendency to substitute malleable iron.

Mr. Wrench.—I think we allow malleable iron or steel.

Dr. Matthai.—Are they equally expensive?

Mr. Wrench.—There is not much difference in price.

President.—Then as regards the standardisation of castings, I take it you really don't know how far you are likely to go.

Mr. Wrench.—We shall standardise detail parts on the new engines which would include steel castings—the same with underframes and wagons.

President.—Then they would be interchangeable.

Mr. Wrench.—Yes.

Fabricated Steel.

Mr. Mathias.—It was alleged in regard to fabricated steel by one of the companies that the last railway report showed Rs. 5 lakhs of expenditure on fabricated steel and some Rs. 40 lakhs on imported fabricated steel. It was pointed out that probably those imports were in respect of orders which were placed before the Steel Industry Protection Act came into force, but at the same time it might help the Board if you could give us the latest figures of fabricated steel that will appear in your next report.

Sir Clement.—We can probably get them. I don't know how soon we can get them out. We had a somewhat similar argument from another quarter. The argument is misleading, because the two figures are not really comparable. One represents imported fabricated steel and the other represents purchases in India of fabricated steel. The last figure doesn't include a very large quantity of materials which we fabricate ourselves in our own workshops. I don't think the latter figures are readily available but they should be taken into consideration.

Dr. Matthai.—There is another point. In the trade returns I notice that there are some figures for railway bridge work. Is that all fabricated work?

Sir Clement.—I should think it is. The Indian Stores Department gives those figures to the *Indian Trade Journal.* Is that what you are referring to?

Dr. Matthai.—I heard a doubt expressed whether we would be justified in taking all railway bridge work shown as such in the Trade Returns as fabricated steel? I think that as you explained, part of it comes out as ordinary rolled steel and is fabricated in your workshop.

Sir Clement.—I can't tell you about this particular heading. I think that the argument was used particularly in regard to rolling stock. They copied these figures to show the rolling stock bought abroad and bought in India but they omitted entirely the whole business of manufacturing coaching stock which is one of our biggest undertakings. All bodies of coaching stock are manufactured in railway workshops do not appear in these figures, so that what they call the advance made by India in the manufacture of rolling stock was not properly represented at all. There is another important thing. Small bridge girders, points, crossings and signal posts and other things are done in the railway workshops. Actually as you know the production in India is going up and the import is coming down.

Mr. Mathias.—There is one other small point. It was stated in evidence that 80 per cent. of the fabricated steel used in India could be manufactured locally and that the other 20 per cent. it would be necessary to get in any case from abroad. Could you give us any information on this point derived from railway experience?

Sir Clement.—If you formulate this question and let us have it we will see whether we can give you any information.

President.—I understand that the Railway Board do not order fabricated steel direct.

Sir Clement.—That is correct.

President.—The railways themselves do it.

Sir Clement.—Yes.

President.—I take it that in the case of a big bridge for instance the order would be scrutinised by the Railway Board but that the order would actually be placed direct by them.

Sir Clement.—We do not as a rule see their tenders.

Mr. Parsons.—I have never seen an order placed for these things going through our hands.

President.—Take the case of a big bridge like the Sarah bridge. Would it go through the Railway Board?

Mr. Wrench.—No. The indent is sent direct to the Director General of Stores who places the order.

Mr. Parsons.—The Railway Board would only sanction their estimates.

Sir Clement.—There is a difficulty which has occurred several times in regard to bridge structures in that Tata's will not or cannot roll certain sections. They refuse to supply them, probably because it does not pay Tata's to roll them. Those sections will always have to be imported.

Mr. Mathias.—Could you give us any idea as to how much of the orders for fabricated steel placed in India were accommodation orders—orders which were required to be executed without delay and for which home manufacturers could not tender.

Sir Clement.—I am afraid we would not be able to give you any figures. The Indian Stores Department might be able to give you because they place orders for fabricated steel not only on behalf of railways but also on behalf of the Public Works Department.

Mr. Mather.—The question I want to ask you about points and crossings is this. In their representation Burn's say "There are undoubtedly many instances in which tenders have not been called for in India by Indian Railways". They also say that they are more frequently called upon to quote for small quantities only which are required urgently. Could you say how far it would be possible for the State Railways to call for tenders? Do they have standing instructions that they should call for tenders in India?

Sir Clement.—I suppose their statement is correct. I do not know to what extent points and crossings are ordered for from home. The railways themselves manufacture a certain amount in their own workshops. So, I don't think that the orders placed in England would be very large, but we have recently somewhat tightened up the procedure regarding the sending of orders home and things of that sort will come to our notice. Possibly some instances have occurred though I don't remember of any case about points and crossings.

President.—I take it that in the case of all orders exceeding a certain amount they would have to call for tenders under the rules.

Sir Clement.—There is no rule to that effect.

Mr. Parsons.—I don't think there is any price limit. As far as I am aware there is no further obligation on them than that they must abide by the Stores Purchase Rules.

President.—Their complaint is that tenders are not called for. They make that general statement. Sometimes they do not really know whether orders are being placed or not.

Mr. Parsons.—I don't think that the Stores Purchase Rules compel them to call for tenders.

President.—Have the Railway Board sent any instructions to the Company Railways?

Sir Clement.—Not on that point.

President.—They will be guided by the ordinary Stores Purchase Rules.

Sir Clement.—State Railways, yes.

President.—And the Company Railways can do as they like.

Sir Clement.—They have got to work within the same policy.

President.—Then, there is no obligation on the part of the Railways to call for any tenders or to call for simultaneous tenders.

Sir Clement.—I don't think it is anywhere laid down that tenders must be called for.

Mr. Parsons.—I am not aware of any such rule.

Mr. Mathias.—In that case the only check on orders being placed abroad which could be placed in India, is that the Indian Stores Department draw the attention of the railway concerned to those orders.

Sir Clement.—Yes.

Mr. Parsons.—I think there is also an audit check. It used to be the duty of the Audit Department to draw the attention of the railway concerned to orders placed in England in contravention of the Stores Purchase Rules.

RAILWAYS.

XV.—Questionnaires issued by the Tariff Board to the Railway Board and Railways.

Rails and fishplates.

1. Please state the quantities and the price per ton of—

(*a*) British,

(*b*) Continental, and

(*c*) Indian rails and fishplates

purchased by your railway / the Railway Board for each year from 1921-22 to 1925-26. In the case of Continental rails and fishplates, please distinguish the country of origin.

N.B.—1. For rails and fishplates purchased in India, please distinguish between those purchased under contract with the Tata Iron and Steel Company and others.

2. For British and Continental rails and fishplates, kindly state where possible the sterling f.o.b. prices and the charges for freight, landing, etc., separately. If this is not possible, kindly state the c.i.f. price in sterling.

2. What do you estimate as the probable consumption by your railway / the Railway Board of rails and fishplates to be debited to—

(*a*) Capital

(*b*) Revenue

account during the next five years?

3. Have you entered into any contracts for the supply of rails and fishplates from 1926-27 onwards? If so, please give full particulars of such contracts stating especially their duration, the quantities contracted for, the price fixed under the contract and the country of origin.

4. (*a*) If you have purchased or propose to purchase Continental rails and fishplates, kindly state fully the considerations which have influenced you in doing so.

(*b*) What specifications, if any, are prescribed for the Continental rails and fishplates which you purchase? Are any arrangements made for the inspection of such rails and fishplates during manufacture? What arrangements are made for the testing of rails and fishplates in the country of origin and in India?

5. What has been your experience in regard to the quality of rails and fishplates manufactured in Great Britain, on the Continent and in India respectively?

6. To what extent would the annual capital or revenue expenditure of your railway be increased by every increase of Rs. 5 in the present duty of Rs. 14 per ton on rails and fishplates, assuming that the price was increased to the full extent of the duty?

7. On the assumption that the Steel industry establishes a case for the continuance of protection and that the payment of bounties will not enable the industry to secure the prices for rails contemplated by the scheme of protection, have you any views as to the form in which protection should be given?

XVI.—Replies to the questionnaires regarding Rails and Fishplates.

1. ASSAM-BENGAL RAILWAY COMPANY, LIMITED.

(1) *Letter, dated the 3rd June 1926.*

With reference to your letter No. 210, dated the 7th May 1926, I beg to give below the information required in the questionnaire:—

Item 1 (a), (b) and (c).

Only rails and fishplates of Indian origin have been purchased since 1921.

These have been purchased from the Tata Iron and Steel Company under contract.

The quantities and rates are—

1921-24 . *Nil.*

1924-25 . 2,445 tons rails at Rs. 125 per ton f.o.r. Tatanagar.
52 tons fishplates at Rs. 155 per ton f.o.r.

1925-26 . Rails 41½ lbs.
3,155·00 tons rails at Rs. 125 per ton f.o.r. Tatanagar.
73·00 tons fishplates for above at Rs. 155 per ton f.o.r. Tatanagar.

No other rails and fishplates have been purchased.

Item 2.

I am unable to give any definite statement of our requirements of rails and fishplates for the next 5 years for Capital works.

Perhaps a figure equivalent to 50 miles of 50 lbs. rails per year might be given, 3,042·00 tons rails and 167·00 tons fishplates.

For revenue work our requirements will be negligible considering the stock in hand amounting to only a few tons fishplates, say 10 tons.

Item 3.

We have not entered into any contracts from 1926-27 onwards.

Item 4 (a) and (b).

We have not purchased any Continental rails or fishplates and do not propose purchasing any unless we find considerable difference in price.

Item 5.

We have no experience of Continental rails, but as between British and Indian rails we consider rails of British manufacture distinctly superior.

Item 6.

This depends on the figures under item (2). If these are taken as correct the answer to this question is—

For Capital for each Rs. 5 of extra duty=Rs. 20,545.

For Revenue for each Rs. 5 of extra duty=Rs. 50.

Item 7.

I have no particular views on this point.

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(2) *Letter from the Tariff Board, to the Assam-Bengal Railway, dated 11th June 1926.*

I am directed by the Tariff Board to thank you for your replies to the Board's questionnaire dealing with rails and fishplates and to say that the Board would be grateful if you would elucidate further your answer to question 5. It is stated in your answer to that question you consider rails of

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British manufacture distinctly superior to those of Indian manufacture (presumably those made by the Tata Iron and Steel Company). The Board would be glad to know—

(*a*) on what grounds you base your opinion that British rails are distinctly superior to India;

(*b*) how long you have used Indian rails and in what quantities; and

(*c*) whether at any time you have drawn the attention of the Tata Iron and Steel Company to this point.

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(3) *Letter from the Assam-Bengal Railway Company, Limited, dated the 8th July 1926.*

With reference to your letter No. 358, dated the 11th June 1926, I enclose for the information of the Board a copy of my Chief Engineer's letter No. A.-3456—9025, dated the 29th June 1926, in which he states the ground on which the statement contained in my letter No. 36-18, dated the 3rd June 1926, that " British rails are distinctly superior to Indian " was based. The Metallurgical Inspector, Jamshedpur, with whom, as stated in my Chief Engineer's letter, he has been in correspondence on the subject will no doubt be in a position to give the Board further details regarding the defects found in the Indian rails referred to by the Chief Engineer.

Copy of letter No. A.-3456—9025, dated 29th June 1926, from the Chief Engineer, Assam-Bengal Railway, to the Agent, Assam-Bengal Railway Company, Limited.

PURCHASE OF RAILS AND FISHPLATES.

Replies to the points raised are as follows:—

(*a*) On what grounds you base your opinion that British rails are distinctly superior to Indian?

My opinion is based on the condition of the 50 lb. rails lately laid on the Hill section.

These rails were received in 1919; 8½ miles of these were used in relaying the rails on the Hill section, season 1924-25. After six months in the track they were reported on as follows:—

> " A good deal of pitting is noticeable and rusting is heavy in tunnels. The metal in the outer skin seems to be flowing rather freely. On many rails scars are noticeable on the head, sometimes as many as 10 to a rail length, where the outer skin seems to have spread laterally, away from the centre of pressure, leaving a local depression. Some of the scars are as much as 2″ in length by ¼″ in width. The fibres have the appearance of running round the central scars and more or less pronounced bur is noticeable on the edge of the rail opposite the scar. Another indication of the free flow of the metal in the outer skin is the rather unexpected fact that the outer rails on curves that have only been in the line about four months have developed a pronounced bur on the *inner* edge of the rail."

A further inspection after another eight months in the road resulted in the following report:—

> " A good deal of pitting is still noticeable and heavy rust in tunnels. On curves the bur or ridge on the inner edge of the outer rails has been flattened out and is now spread out in a thin film over the face of the rail ¼″ to ⅜″ deep.
>
> On the straits there is still a pronounced ridge on the inner edge of the rails. The scars in the table of the rail referred to in my report of the 10th July 1925 are less pronounced, but the ridge on the edge of the rail opposite them can still be noticed.
>
> The heads of some of the rails are flanking in long strips about ¼″ wide and in one case as much as 2′ 3″ long."

From the above it would appear that my remark was fully justified.

(*b*) How long you have used Indian rails and in what qualities?

From 1913 the Indian rails are being used. Up to date 8,316 tons 41¼ lb. and 2,000 tons 50 lb. rails with fishplates are in use.

(*c*) Whether at any time you have drawn the attention of the Tata Iron and Steel Company to this point?

This matter has not been reported to Tatas. It has been reported to the Metallurgical Inspector, Jamshedpur, and the matter is still under correspondence with him. I have no doubt he has informed Messrs. Tatas.

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2. BENGAL NAGPUR RAILWAY COMPANY, LIMITED.

Letter, dated the 14th June 1926.

With reference to your letter No. 210, dated the 7th May 1926, I beg to enclose my replies to the questionnaire of the Tariff Board in regard to the purchase of rails and fishplates.

1. Please see statements "A" and "B" enclosed.

	Miles.
2. Capital—	
1926	26
1927	50
1928	113
1929	43
1930	The demand is not yet known.
Mixed Capital and Revenue .	50 miles per annum, the allocation between Capital and Revenue cannot be determined at present.

3. No.

4. (*a*) During 1924-25, 4,243 tons of rails were purchased from Germany.

The purchase was made by my Board of Directors in London and I am not aware of the considerations which influenced their doing so. It was presumably a question of price.

(*b*) A copy of the specification of the rails referred to enclosed in 4 (*a*) above. The rails were tested at the works by a representative of our Consulting Engineers, Sir John Wolfe Barry and Partners. No further test was considered necessary in India.

5. The quality of rails and fishplates supplied from Great Britain is good. The German rails have been laid on a newly constructed branch which has not yet been opened for traffic and consequently we are not in a position to report on them.

As regards Tata's rails, a few cases have been reported of rails corroding quickly and these are under investigation by the Metallurgical Inspector at Tatanagar, but the quality of the steel in general is good. The chief complaint is that the sections are not as accurately rolled as British sections.

6. Roughly Rs. 49,000 Capital and Rs. 31,000 Revenue per annum. This answer, of course, assumes that Indian Manufacturers would advance their prices to the full corresponding extent.

7. I can suggest no way by which the desired result can be secured.

Enclosure I.

Statement showing rails and fishplates purchased in India during the years 1921-22 to 1925-26.

Year.	Source of supply.	Materials.	Quantity.	Rate.	Unit	Delivery.	Remarks.
			Tons.	Rs. A. P.			
1921-22.	The Tata Iron & Steel Co.	Rails 90 lbs.	14,145	110 0 0	per ton	F. O. R. Jamshedpur.	Purchased against 5-year contract with the Tata Iron and Steel Co.
	Ditto	Fishplates 90 lbs.	617	140 0 0	,,	,,	
1922-23	Ditto	Rails 90 lbs.	14,357	110 0 0	,,	,,	
	Ditto	Fishplates 90 lbs.	600	140 0 0	,,	,,	
1923-24.	Ditto	Rails 90 lbs.	12,617	110 0 0	,,	,,	
	Ditto	Rails 75 lbs. B. S.	2360·15	110 0 0	,,	,,	
1924-25.	Ditto	Rails 90 lbs.	8580·20	110 0 0	,,	,,	
	Ditto	Rails 75 lbs. B. S.	6,460	110 0 0	,,	,,	
1921-22.	Ditto	Rails 90 lbs II Class	63·65	110 0 0	,,	,,	
	Ditto	Fishplates 90 lbs.	2·65	140 0 0	,,	,,	
1923-24.	Ditto	Rails 41½ lbs.	11·05	120 0 0	,,	,,	
	Ditto	Fishplates 41½ lbs.	0·25	140 0 0	,,	,,	
1924-25.	Ditto	Rails 41½ lbs.	184·15	120 0 0	,,	,,	
	Ditto	Fishplates 41½ lbs.	4·10	140 0 0	,,	,,	
	Ditto	Rails 90 lbs. II Class	269·00	77 0 0	,,	,,	
	Ditto	Rails 90 lbs. I Class	7,496	140 0 0	,,	,,	
			Pairs				
1922-23	Messrs. Henry Williams	Anti-Impact Fishplates 90 lbs.	15,000	9 8 0	per pair	,,	
1923-24.	Ditto	Ditto 75 lbs. B. N.	10,560	9 0 0	,,	,,	
,,	Ditto	Ditto 75 lbs. B. S.	23,000	9 0 0	,,	,,	
,,	Ordnance Factory, Ichapur.	75 lbs. B. N. old type Fishplates	3,839	8 12 0	,,	,,	
		Anti-Impact Fishplates 90 lbs.	45,453	9 8 0	,,	,,	
1924-25	Messrs. Henry Williams	Ditto 75 lbs B. S.	3,186	8 0 0	,,	,,	
		Ditto 75 lbs. B. N.	8,850	8 12 0	,,	,,	
		Ditto 85 lbs.	3,450	8 8 0	,,	,,	

Enclosure II.

Statement showing Rails and Fishplates purchased abroad during the years 1921-22 to 1925-26.

Year.	Source of supply.	Materials.		Quantity.	Rates per ton.			
					Price F. O. B.	Freight and insurance.	Duty.	Landing charges.
			lbs.	tons.	£ s. d.	£ s. d.	Rs. A. P.	Rs. A. P.
1922-23	Guest, Keen and Nettlefolds.	Rails	90	8,486	7 10 0	1 0 11	...	3 2 0
		Fishplates	90	365½	10 10 0	1 0 11	...	3 2 0
		Rails	90	2,268	7 10 0	1 0 11	...	3 2 0
		Fishplates	90	97½	10 10 0	1 0 11	...	3 2 0
		Rails	90	7,067½	7 10 0	1 0 11	...	3 2 0
		Fishplates	90	101½	7 10 0	1 0 11	...	3 2 0
1924-25	Bochumer Verein, Germany	Rails	90	4,243	6 10 0	0 16 10	11 0 0	3 2 0
1925-26	Cargo Fleet Iron Co.	Rails	40	632	7 0 0	0 19 4	11 15 0	3 2 0
		Fishplates	40	21	12 12 6	1 1 11	20 9 0	3 2 0

Enclosure III.

Specification for 90 lbs. rails supplied by the Bochumer Verein, Germany.

Chemical composition.—The steel and the rails shall conform to the following limits of chemical composition:—

	Open Hearth.		Bessemer, Acid.
	Acid.	Basic.	
Carbon	0·45 to 0·55	0·45 to 0·60.	0·40 to 0·50.
Manganese	0·90 (max)	0·90 (max)	0·70 to 1·00.
Silicon	0·15 (max)	0·15 (max)	0·15 (max).
Phosphorus	0·06 (max)	0·05 (max)	0·07 (max).
Sulphur	0·06 (max)	0·06 (max)	0·07 (max).

Deflection test.—One piece of rail 6 feet long will be taken from every 50 tons of rails manufactured, placed on iron bearings 3 ft. 6 ins. apart in the clear, and equidistant from its ends, and a weight of 30 tons will be suspended from the centre of the rail. The deflection under this weight, measured on the distance between the centres of the bearings, must not exceed one-fourth of an inch after the weight has been on the rail half an hour. No permanent set must appear upon the removal of the load.

Falling weight test.—The same piece of rail will be supported as before and a tup weighing one ton will be allowed to fall freely upon the centre of the rail from a height of 26 ft. the rail shall bear two such blows without showing the least sign of fracture. The permanent set caused by the first blow shall not exceed 3¾ ins. and the total deflection of the rail, measured on the distance between the centres of the bearings, after both blows have been given, shall not exceed 7½ ins. The rail shall then be broken by further blows, and shall show perfectly sound and homogeneous fracture of such a character as shall be satisfactory to the Company's Engineer.

Tensile test.—From a sample rail selected by the Company's Engineer out of every 100 tons or part of 100 tons of rails rolled, the Contractor shall, if required by the Company's Engineer, prepare a tensile test piece which shall be stamped to correspond with the sample rail. The test piece shall be broken in a testing machine of approved pattern, and shall show a tensile breaking strength of not less than 40 tons and not more than 48 tons per square inch, with an elongation of not less than 15 per cent. using British Standard Test Piece C or D. Should the test pieces fail to fulfil these conditions, the Company's Engineer may require the Contractor to test two other rails from the same cast in the same manner, and the acceptance or rejection of the cast shall be decided by the results of the three tests, so that if two of three rails selected fail to comply with the test the entire cast will be rejected.

Rejection.—If any rail tested fails to comply with any of the tests given above, the cast to which it belongs will be rejected.

3. BOMBAY, BAORDA AND CENTRAL INDIA RAILWAY COMPANY, LIMITED.

(1) Letter, dated the 11th June 1926.

As desired in your letter No. 210 of 7th May 1926, I beg to send herewith seven copies of the replies to the questionnaire relating to the purchase by the Bombay, Baroda and Central India Railway of rails and fishplates.

Answer (1).

1. (*a*) Rails 90 lbs.

Cost.

	Quantity.	F. O. B. rate per ton.	Freight, Insurance, etc. per ton.	Customs, landing and dock charges per ton.
		£ s. d.	£ s. d.	Rs. A. P.
1921-22	*Nil.*	...	...	...
1922-23	*Nil.*	...	...	...
1923-24	5,255 tons	8 5 0	1 0 10	18 6 0
1924-25	*Nil.*	...	...	...
1925-26	*Nil*	...	...	...

Cost per ton landed in Bombay at Rs. 15 per £1 is Rs. 158 per ton.

Rails 50 lbs.

	Quantity.	F. O. B. rate per ton.	Freight, Insurance, etc. per ton.	Customs, landing and dock charges per ton.
		£ s. d.	£ s. d.	Rs. A. P.
1921-22	1,682 tons.	8 8 9	1 5 4	17 14 10
1922-26	*Nil.*	...	...	...

Cost per ton landed is approximately Rs. 163-8-0 per ton.

Fishplates 50 lbs., 90 lbs., 69 lbs.

	Quantity.	F. O. B. rate per ton.	Freight, Insurance, etc. per ton.	Customs, landing and dock charges per ton.
	Tons.	£ s. d.	£ s. d.	Rs. A. P.
1921-22 Fishplates	101	12 10 0	1 2 0	30 4 3
1922-23 ,,	208	9 12 6	1 7 6	19 12 8
1923-24 ,,	*Nil.*	...	...	...
1924-25 ,,	452	12 15 0	0 18 8	18 15 11
1925-26 ,,	100	11 2 6	0 18 7	14 0 5

1. (*b*) No continental rails were purchased.

1. (*c*) Indian rails and fishplates purchased from the Tata Iron and Steel Company under contract.

—	Rails 90 lbs.		Fishplates 90 lbs.		Rails 60 lbs.		Fishplates 60 lbs.	
	Quantity.	Rate F. O. R. Tatanagar.	Quantity.	Rate F. O. R. Tatanagar.	Quantity.	Rate F. O. R. Tatanagar.	Quantity.	Rate F. O. R. Tatanagar.
	Tons.	Rs. A. P.	Tons.	Rs. A. P.	Tons.	Rs. A. P.	Tons.	Rs. A. P.
1921-22 . . .	4,562	122 8 0	508	152 8 0	...	...	77	152 8 0
1922-23 . . .	6,540	122 8 0	424	152 8 0	3,235	122 8 0	142	152 8 0
1923-24 . . .	1,415	122 8 0	...	...	4,550	122 8 0	151	152 8 0
1924-25 . . .	6,442	122 8 0	172	152 8 0	1,045	122 8 0	58	152 8 0
1925-26 . . .	14,463	122 8 0	531	152 8 0	5,544	122 8 0	238	152 8 0

Answer (2).

90 lbs. rails.

Year.	Rails.			Fishplates.		
	Tons.	Capital.	Revenue.	Tons.	Capital.	Revenue.
		Rs.	Rs.		Rs.	Rs.
1927-28	8,371	1,38,678	10,02,088	614	16,481	84,531
1928-29	5,496	3,03,064	4,09,323	379	20,514	42,075
1929-30	7,212	5,47,404	4,09,293	327	34,127	19,800
1930-31	2,869	3,89,612	4,675	135	20,898	1,320
1931-32	34	...	4,675	8	...	1,320

60-lbs. rails.

	Rails.		Fishplates.	
1927-28 . .	5680	Capital 32 per cent.	250	Capital 55 per cent.
1928-29 . .	5680		250	
1929-30 . .	5680	Revenue 68 per cent.	250	Revenue 45 per cent.
1930-31 . .	5680		250	
1931-32 . .	5680		250	

Answer (3).

Contract for rails and fishplates for 1926-27 placed with Messrs. Tata Iron and Steel Company no forward contracts have been made as yet.

Answer (4).

No continental rails and fishplates have been purchased.

Answer (5).

The Chief Engineer reports as follows:—

"I have the honour to report that Tata rails lying on the same stretch of track on the C. R. section as post war (1924) English rails have been examined along with the English Rails. The only difference noticeable is that the Tata rails when laid on the outside of curves shows evidence of a slight flow of the metal of the head on the running side. Such flow in the case of English rails has only been noticed in one or two isolated cases. When laid on the straight Tatas and Post war English rails are equally satisfactory. It would appear that Tata rails show evidence of a soft skin but that in other respects they are sound."

The Engineer-in-Chief reports as follows:—

"All our rails have been purchased from Messrs. Tata & Co. in India during the last 5 years. They have not been found to be as good as English pre-war rails. Some English rails purchased in 1919-20 from Messrs. Dorman Long & Co. were found to be no better than the Tatas—we have no experience of any other English rails as none manufactured. Continental rails are not used on this system."

Answer (6).

If the rails are purchased from Messrs. Tata Iron and Steel Co. the extra custom duty will not directly affect this Railway. If however the future supplies of rails are imported the annual capital and revenue expenditure will be increased as follows for every increase of Rs. 5 in the present duty.

Year.	Capital.	Revenue.	Total.
	Rs.	Rs.	Rs.
1927-28	29,630	44,445	74,075
1928-29	23,610	35,415	59,025
1929-30	26,938	40,407	67,345
1930-31	17,868	26,802	44,670
1931-32	11,944	17,916	29,860

Answer (7).

No remarks.

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(2) *Letter from the Bombay, Baroda and Central India Railway Company, dated the 21st July 1926.*

With reference to the replies to the questionnaire sent to the Tariff Board with my letter No. T.-219 of 11th June 1926, I would draw your attention to the fact that customs duty charges shewn in each of the statements accompanying my above letters, though paid by the Railway Company during the years 1921-22, 1922-23 and 1923-24, were refunded to this Railway subsequently at the time when it was decided that stores imported by the Railway Company were to be considered as stores belonging to the Government and as such not liable to customs duty.

As the amounts of duty refunded have not been posted in our Audit books, I have left the customs charges as originally paid by this Railway in the statements referred to above.

4. BURMA RAILWAYS COMPANY, LIMITED.

Letter, dated the 12th July 1926.

I forward my replies (so far as I am able to furnish them) to the following questionnaires :—

(*a*) Rails and fishplates (received with your letter No. 210, dated the 7th May 1926).

2. Where views are expressed, they are not necessarily those of my Home Board.

3. A copy goes to the Railway Board.

(Replies to Tariff Board's letter No. 210, dated 7th May 1926.)

RAILS AND FISHPLATES.

1. Please see 3 statements attached. The only rails and fishplates purchased in India are those from Tata's works.

2. The probable consumption of rails and fishplates during the five years 1926-27 to 1930-31 is given below.

	Capital.		Revenue.	
	Rails.	Fishplates.	Rails.	Fishplates.
	Tons.	Tons.	Tons.	Tons.
60 lbs. Section.				
1926-27	7,273	343·64	8,727	412·36
1927-28	12,258	526·50	8,486	364·50
1928-29	18,385	789·75	...	...
1929-30	20,744	891·00	...	...
1930-31	9,429	405·00	...	...
50 lbs. Section.				
1929-30	7,857	322	...	...
1930-31	7,857	322	...	...

3. For 1926-27, 16,000 tons of 60 lbs. rails have been contracted for with Messrs. Baldwins Limited, under English Contract No. 4367, dated the 26th March 1926, at £6-5-5 per ton f.o.b. Swansea, the supply to be completed by 31st August 1926.

Also 756 tons of fishplates for 60 lbs. rails are under supply by Messrs. Baldwins Limited, on Contract No. 4368, dated the 26th March 1926, at £10-15 per ton, f.o.b. Swansea, to be completed by the 31st July 1926.

4. (*a*) We do not specify the country of origin when indenting for rails, the Home Board place all such contracts.

(*b*) In view of (*a*) above, this question does not arise.

5. We have no experience of Continental rails. Of those from Great Britain and India, the former are superior in quality.

6. Taking the figures detailed in paragraph 2 above, the increase in Capital and Revenue expenditure would be approximately as follows :—

	Capital.	Revenue.
	Rs.	Rs.
In 1926-27	38,000	46,000
In 1927-28	64,000	14,000
In 1928-29	96,000	...
In 1929-30	1,08,000	...
In 1930-31	49,000	...
TOTAL .	3,55,000	90,000
Or an average per year of . .	71,000	45,000

7. I have no remarks to offer.

Enclosure No. 1.

Statement of Indian Rails and Fishplates purchased during 1921-22 to 1925-26.

Question No. 1.

Period.	60 LBS. RAILS.		FISHPLATES FOR 60 LBS. RAILS.		REMARKS.
	Quantity purchased.	C. I. F. Rate per ton.	Quantity purchased.	C. I. F. Rate per ton.	
	Tons.	Rs. A. P.	Tons.	Rs. A. P.	
1921-22	8,356	145 14 0	247	175 12 0	
1922-23	5,657	145 14 0	120	175 12 0	
1923-24	4,990	145 14 0	151	175 12 0	
1924-25	4,225	145 14 0	301	175 12 0	
1925-26	8,502	145 14 0	295	175 12 0	

Enclosure No. 2.

Statement of Continental Rails and Fishplates purchased during 1921-22 to 1925-26.

Question No. 1.

Period.	60 lbs. Rails.		Fishplates for 60 lbs. Rails.		Remarks.
	Quantity purchased.	C. I. F. Rate per ton.	Quantity purchased.	C. I. F. Rate per ton	
	Tons.	£ s. d.	Tons.	£ s. d.	
1921-22	...	...	...	...	
1922-23	...	...	...	...	
1923-24	...	...	...	...	
1924-25	...	...	...	...	
1925-26	2,263	7 2 6 to 8 2 6	140	9 12 6 to 10 2 6	

Enclosure No. 3.

Statement of English Rails and Fishplates purchased during 1921-22 to 1925-26.

Question No. 1.

Period.	60 lbs. Rails.		Fishplates for 60 lbs. Rails.		Remarks.
	Quantity purchased.	C. I. F. Rate per ton.	Quantity purchased.	C. I. F. Rate per ton.	
	Tons.	£ s. d.	Tons.	£ s. d.	
1921-22	1,885	12 19 0	80	18 10 0	
1922-23	*Nil*	...	11	13 13 9	
1923-24	12,715	8 8 6 to 19 9	562½	8 8 6 to 11 19 9	
1924-25	1,349	9 11 0	37½	13 11 0	
	93 (Special sorbitic.)	11 0			
1925-26	*Nil.*	*Nil.*	*Nil.*	*Nil.*	
1925-26	lbs. 50 Tons. 786	8 1 0	26¾	10 1 0	50 lbs. section.

5. EASTERN BENGAL RAILWAY.

Letter, dated the 21st June 1926.

With reference to your letter No. 210, dated 7th May 1926, I enclose herewith a statement containing information required by the Tariff Board concerning rails and fishplates.

1. (*a*) and (*b*) No British or Continental rails and fishplates were purchased by the Eastern Bengal Railway from the year 1921-22 to 1925-26.

(*c*) Rails and fishplates have been purchased from Messrs. The Tata Iron and Steel Co., Ld., Tatanagar, under contract with the Railway Board. Annexure 'A' shows the purchases of rails and fishplates year by year from 1921-22 to 1925-26.

N.B.—1. No purchase of Indian rails and fishplates was made from any firm other than the Tata Iron and Steel Company from the year 1921-22 to 1925-26.

2. Reply to question 1 (*a*) and (*b*) may be referred to.

2. Annexure B shows the probable consumption of rails and fishplates to be debited to (*a*) Capital, (*b*) Reverue, during the next 5 years, *viz.*, 1927-28 to 1931-32.

3. No.

4. (*a*) No Continental rates have been purchased from the year 1921-22 to 1925-26 nor is it proposed to purchase such rails in the future.

(*b*) Kindly see reply to 4 (*a*) above.

5. This Railway has had enquiries made but is unable to record any useful comparisons between Tata's and postwar English rails, that is to say, rails that this Railway has had in the road for any time have not been subjected to conditions sufficiently similar to make comparison of any value.

6. Annexure C shows the extent of increase in the Capital and Revenue expenditure if the duty per ton is increased by Rs. 5 on rails and fishplates supplied by Tatas.

7. No views to express.

ANNEXURE A.

Purchase of rails and fishplates by the Eastern Bengal Railway from 1921-22 to 1925-26.

Year.	Rails.		Fish-plates.	
	Tons.	Rate per ton.	Tons.	Rate per ton.
...	...	Rs. 130 up to 30th September 1921.	...	Rs. 160 up to 30th September 1921.
1921-22	5,352	Rs. 156 up to 31st March 1922.	308·46	Rs. 186 up to 31st May 1922.
1922-23	3 306	Rs. 156 per ton .	134·32	Rs. 186 per ton.
1923-24	2,990·62	„ 156 „ .	77·32	„ 186 „
1924-25	351·11	„ 130 „ .	99·00	„ 160 „
1925-26	12,259	„ 130 „ .	160·95	„ 160 „

ANNEXURE B.

Probable consumption of rails and fishplates to be debited to Capital and Depreciation during the next five years, viz., 1927-28 to 1931-32.

	Capital.	Depreciation.
	Rs.	Rs.
1927-28	12,00,000	1,18,000
1928-29	10,71,000	1,06,000
1929-30	15,29,000	66,000
1930-31	9,02,000	66,000
1931-32	11,75,000	89,000

ANNEXURE C.

Statement showing extent of increase in the Capital and Revenue Expenditure if the duty per ton is increased by Rs. 5 on rails supplied by Tatas.

In the year 1927-28 the probable consumption of rails and fishplates has been estimated at—

	Capital.		Depreciation.	
Rails	8,802 tons at Rs. 130 per ton=Rs.	11,44,260	802 tons at Rs. 130 per ton=Rs.	1,12,060
Fish-plates	352 tons at Rs. 160 per ton=Rs.	56,320	35 tons at Rs. 160 per ton=Rs.	5,600
	9,152 tons	12,00,580	897	1,17,660
	Say .	12,00,000		1,18,000

Now by the increase of duty by Rs. 5 the Capital and Depreciation Expenditure of Eastern Bengal Railway for 1927-28 for rails and fishplates will be increased by—

	Rs.
Capital 9,152×5	45,760, *i.e.*, 3·8 per cent.
Depreciation 897×5	4,485, *i.e.*, 3·8 per cent.

6. EAST INDIAN RAILWAY.

Letter dated 8th June 1926.

With reference to your letter No. 210, dated 7th May 1926, regarding the questionnaire relating to the purchase by this Railway of rails and fishplates, I beg to reply as follows:—

I. The attached list in the five sheets furnishes all the informations required.

II. The following is the estimate showing the probable anticipated consumption of rails and fishplates during the next five years on this Railway debitable to Capital and Revenue:—

(*a*) Capital { (*a*) Rails, (*b*) Fishplates } information not available yet.

(*b*) Revenue { (*a*) Rails { 88½ lb. B. H. 6160 tons per year. 90 „ F. F. 1500 „ „ 90 „ F. F. 63892 during 1927-28. (*b*) Fishplates { No. 102440 for 1927-28. No. 2648 for each of the next 4 years.

III. Orders have been placed on Messrs. The Tata Iron and Steel Company for 4,620 tons of 88½ lbs. B. H., E. I. R. Standard section rails and 203 tons of fishplates as also 5,179 tons of 90 lbs. F. F. New British Standard section rails and 160 tons of fishplates. The rails are priced at Rs. 130 per ton and the fishplates at Rs. 160 per ton as contracted for by the Secretary of State for

India in his Agreement entered into on 7th August 1920 with Messrs. The Tata Iron and Steel Company. The period covered by this agreement is seven years commencing 1st April 1920. No further forward contracts have been entered into by me.

IV. (*a*) No Continental rails were purchased during 1921-22 to 1925-26 and I am not aware of any future intention to purchase Continental rails.

(*b*) The question does not arise.

V. Rails and fishplates manufactured in India have only been in use since 1916 and it is therefore not possible to draw any useful comparison between them and rails manufactured in Great Britain. But as far as I can judge they appear to be satisfactory.

VI. Had the present duty of Rs. 14 per ton been increased by Rs. 5 per ton the debit to Revenue in 1924-25 would have been increased by Rs. 534 and the debit to Capital in 1925-26 by Rs. 62,683.

VII. I have no views to offer with regard to the protective duties to be imposed.

Enclosure 1.

For the year 1921-22.

Country of origin.	Section.	Quantity.				Price per Ton. F. O. B.			Charges per Ton.		
		Tons.	cwts.	lbs.	ozs.	£	s.	d.	Rs.	A.	P.
	Indent No. 104.										
	75 lbs. D. H.	500	0	0	0	9	5	0	19	3	2
	74 „ F. F.	500	0	0	0	9	5	0	19	8	8
	90 „ „	1,500	0	0	0	9	5	0	19	8	8
	93½ „ „	1,500	0	0	0	9	5	0	19	9	3
	Indent No. 147.										
	100 lbs. F. F.	7,857	0	0	0	9	4	6	19	8	0
	Fishplates	444	13	3	14	14	4	6	39	0	0
England	*Indent No. 164.*										
	38½ lbs. B. H.	11,141	0	0	0	8	10	0	30	14	1
	100 „ F. F.	11,000	0	0	0	7	17	6	29	6	5
	Fishplates	508	14	0	16	12	10	0	36	8	0
		620	11	1	18	12	0	0	35	12	0
	Indent No. 180.										
	75 lbs. D. H.	500	0	0	0	7	16	0	29	9	7
	74 „ F. F.	500	0	0	0				28	6	10
	90 „ „	1,500	0	0	0				28	14	5
	93½ „ „	500	0	0	0				29	2	11

Enclosure 2.

For the year 1922-23.

Country of origin.	Section.	Quantity.				Price per Ton. F. O. B.			Charges per Ton.		
	Indent No. 219.	Tons	cwts.	lbs.	ozs.	£	s.	d.	Rs.	A.	P.
England .	74 lbs. F. F. . .	500	0	0	0	8	7	6	29	9	1

Enclosure 3.

For the year 1923-24.

Country of origin.	Section.	Quantity.				Price per Ton. F. O. B.			Charges per Ton.		
	Indent No. 290.	Tons	cwts.	lbs.	ozs.	£	s.	d.	Rs.	A.	P.
England .	88½ lbs. B. H. . .	10,424	0	0	0	8	11	3	13	8	7*
	Fishplates . .	155	7	3	12	8	11	3	13	7	0*
	Indent No. 291.										
	88½ lbs. B.-H. .	300	0	0	0	8	11	3	13	2	3*
	74 ,, F. F. .	500	0	0	0	8	11	3	13	9	10
	Fishplates . .	14	6	1	0	8	11	3	13	7	0*
	Indent No. 292.										
	88½ lbs. B. H. . .	960	0	0	0	8	11	3	13	2	3*
	Fishplates . .	25	11	0	18	8	11	3	13	7	0*
	Indent No. 293.										
	88½ lbs. B. H. .	350	0	0	0	8	11	3	13	2	3*
	Fishplates . .	15	16	3	19	8	11	3	13	7	0*
	Indent No. 294.										
	88½ lbs. B. H. . .	210	0	0	0	8	11	3	13	2	3*
	Fishplates . .	9	6	0	7	8	11	3	13	7	0*
	Indent No. 295.										
	88½ lbs. B. H. .	1,400	0	0	0	8	11	3	13	2	3*
	Fishplates . .	62	7	0	26	8	11	3	13	7	0*
	Indent No. 299.										
	Fishplates . .	201	18	0	19	8	11	3	13	7	0*

* Duty free.

Enclosure 4.

For the year 1924-25.

Country of origin.	Section.	Quantity.				Price per Ton. F. O. B.	Charges per Ton.
		Tons	cwts.	lbs.	ozs.	£ s. d.	Rs. A. P.
	Indent No. 347.						
	88½ lbs. B. H.	500	0	0	0	...	115 6 9
	75 „ D. H.	500	0	0	0		
	74 „ F. F.	500	0	0	0		
	90 „ „	1,500	0	0	0		
	93½ „ „	250	0	0	0		
	Fishplates	20	8	3	20	...	155 0 0
	Indent No. 348.						
	88½ lbs. B. H.	1,400	0	0	0	...	115 6 9
	Fishplates	61	10	3	14	...	155 0 0
	Indent No. 349.						
India	88½ lbs. B. H.	2,517	0	0	0	...	115 6 9
	Fishplates	120	0	1	18	...	155 0 0
	Indent No. 404.						
	90 lbs. F. F.	2,751	0	0	0	...	115 6 9
	Fishplates	120	0	1	18	...	155 0 0
	Indent No. 405.						
	88½ lbs. B. H.	9,848	0	0	0	...	115 6 9
	Fishplates	507	16	0	17	...	155 0 0
	Indent No. 415.						
	90 lbs. F. F.	1,014	0	0	0	...	115 6 9
	Fishplates	43	15	2	2	...	155 0 0

Enclosure 5.

For the year 1924-25.

Country of origin.	Section.	Quantity.	Price per Ton. F. O. B.	Charges per Ton.
		Tons cwts. lbs. ozs.	£ s. d.	Rs. A. P.
	Indent No. 417.			
India	90 lbs. F. F.	545 0 0 0	...	115 6 9
	Fishplates	23 10 1 2	..	155 0 0
	Indent No. 427.			
Germany	90 lbs. F. F.	12,128 0 0 0	7 13 6	11 11 9
	Fishplates	523 2 3 10	7 13 6	9 9 0

7. GREAT INDIAN PENINSULA RAILWAY.

Letter, dated the 15th June 1926.

In reply to your letter No. 210, dated the 7th May 1926, I send you herewith my answers to the questionnaire relating to the purchase of rails and fishplates by this Railway Administration.

1. (*a*) British rails and fishplates supplied on Home indent during 1921-22 to 1925-26 are as follows :—

Year.	Description.	Tons.	Rate per ton.	F. O. B.	Freight per ton.
			£ s. d.		£ s. d.
1921-22	Rails	4,761	7 18 0	Cardiff	1 0 0
	Fishplates	207	11 10 0	Do.	1 0 0
1922-23	Rails	7,577	7 18 0	Do.	1 0 0
			7 11 3	Glasgow	1 0 0
	Fishplates	300	12 10 0	Do.	1 0 0
1923-24	Rails	14,741	7 13 9	Middlesborough.	0 16 0
	Fishplates	516	11 13 9	Do.	0 16 0
1924-25	Rails	809	8 13 9	Do.	0 16 0
	Fishplates	1,427	9 18 6	Do.	0 16 0
1925-26	Rails	785	9 13 6	Do.	0 16 0
	Fishplates	21	11 17 6	Do.	0 16 0

(*b*) Continental rails and fishplates supplied on Home indent as under:—

Year.	Description.	Tons.	Rate per ton.	F. O. B.	Freight per ton.
			£ s. d		£ s. d.
1925-26	Rails	4,274	6 19 6	Antwerp .	0 17 0
	Fishplates . . .	138	9 0 0	Do. .	0 17 0

(*c*) Indian rails and fishplates were purchased from Tatas during 1921-22 and 1925-26 as follows:—

Year.	Description.	Tons.	Rate per ton.
			Rs.
1921- 2	Rails	1,976	128
1922-23 to 1924-25	*Nil*	. .	...
1925-26	Rail	10,183	130
	Fishplates	324	160

2. Rails and fishplates required during the next 5 years are as under:—

	Capital.	Revenue.
	Tons.	Tons.
Rails	43,871	1,100
Fishplates	1,359	41

Such contracts are entered into by the Railway Board with Tatas.

3. (*a*) Indents for rails and fishplates were hitherto sent to the late Great Indian Peninsula Railway Home Board. In 1925 the Home Board placed an order on a firm in Belgium for 4,274 tons of rails and 138 tons of fishplates. Tatas were unable to meet the demand and the order was arranged by indent on Home. The Railway Board in their letter No. 1705 S-XVI, dated the 20th May 1926, directed that no restriction should be placed on Continental manufacture as the High Commissioner is generally guided by business principles of accepting the lowest possible tender.

(*b*) See answer No. 2 above. Arrangements are made by the Railway Board.

4. From Great Britain, satisfactory; from the Continent, rails recently received, and experience insufficient; and from India, satisfactory.

5. The increased annual expenditure would be as under:—

Year.	Description.	Tons.	Capital.	Tons.	Revenue.
			Rs.		Rs.
1926-27	Rails	8,856	45,695	1,100	5,705
	Fishplates	283		41	
1927-28	Rails	23,991	1,23,640	...	...
	Fishplates	737			
1928-29	Rails . . .	11,024	56,815	...	...
	Fishplates	339			

6. This should be referred to the Railway Board.

8. MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

(1) Letter, dated the 14th June 1926.

With reference to the questionnaire sent with your letter No. 210, dated the 7th May 1926, relating to the purchase by this Railway of rails and fishplates from 1921-22 to 1925-26, I have the honour to reply as follows :—

I. (*a*) Purchases made in England.

Year.	Rails.	Rate.	Fishplates.	Rate.
	T. C. Q. lbs.	£ s. d.	T. C. Q. lbs.	£ s. d.
1921-22	*Nil*	*Nil*	*Nil*	*Nil*
1922-23	4,016 15 1 27	7 10 0	130 10 0 4	10 10 0
1923-24	3,775 11 0 3	9 2 3	125 11 0 18	9 2 3
	1,897 11 1 5	8 15 0	62 9 2 6	12 15 0
	949 3 3 0	8 5 0	25 6 0 23	11 5 0
1924-25	*Nil*	*Nil*	*Nil*	*Nil*
1925-26	*Nil*	*Nil*	*Nil*	*Nil*

The rates given are f.o.b. England and do not include incidental charges.

(*b*) *Nil.*

(*c*) I give below the quantity of rails and fishplates of different sections purchased by this Railway from Messrs. The Tata Iron and Steel Company of Jamshedpur against six years' contract from 1921-22 to 1925-26 with the rate per ton noted against each.

Year.	Rails.	Fishplates.	Remarks.
	Tons.	Tons.	
1921-22	9,911	291	Cost of rails is Rs. 122-8 and fishplates is Rs. 152-8 per ton delivered f.o.r. Tatanagar.
1922-23	12,793	376	
1923-24	13,832	406	
1924-25	19,256	563	
1925-26	15,870	465	

II. The probable consumption of rails and fishplates of different sections during the next five years will be as follows :—

Year.	Rails.	Fishplates.
	Tons.	Tons.
1926-27	15,384	444
1927-28	13,697	396
1928-29	13,315	388
1929-30	14,213	415
1930-31	13,376	398

III. The arrangements for 1926-27 supply are :—

	Rails.	Rate per ton.	Fishplates.	Rate.
	T. C. Q. lbs.	£ s. d.	T. C. Q. lbs.	£ s. d.
Home supply . . .	13,404 1 0 11	6 8 6	444 2 2 7	10 8 6
Tata's supply . . .	1,980 0 0 0	Rs. 105 per ton rails only.		...

IV. (*a*) and (*b*) *Nil.*

V. Tatas rails are found to be inferior to English rails.

VI. Rs. 75,000 of which Rs. 11,000 Capital and Rs. 64,000 Revenue.

VII. We have no special proposals.

9. NORTH WESTERN RAILWAY.

Letter, dated the 22nd/28th July 1926.

With reference to your letter No. 210, dated 7th May 1926, I beg to forward, herewith, a copy of answers to the questionnaire relating to the purchase of rails and fishplates.

2. Six spare copies of answers are also herewith enclosed as desired.

3. Answers to questionnaire relating to the purchase of steel materials other than rails and fishplates will follow.

4. The delay in replying is much regretted.

Answer 1.—(*a*) and (*b*) No British or Continental rail and fishplates were purchased in the period under revision.

(*c*) The following rails and fishplates were purchased in India under contract with Messrs. Tata Iron and Steel Company :—

Year.	Price per ton.		Purchased from Tata.		Remarks.
	Rails.	Fishplates.	Rails.	Fishplates.	
	Rs.	Rs.	Tons.	Tons.	
1920-21 . . .	130	160	13,178·48	511·11	
1921-22 . . .	130	160	20,659·34	958·00	Rs. 156 and 186 per ton respectively from 1st October 1921.
1922-23 . . .	156	186	18,217·77	619·56	
1923-24 . . .	156	186	21,500·25	673·51	
1924-25 . . .	130	160	16,927·25	952·42	
1925-26 . . .	130	160	18,164·00	988·00	

Supplies for the year 1920-21 have been included as shortage of supplies during this year were delivered in the next year (1921-22).

Answer 2.—Probable consumption by the North Western Railway of rails and fishplates to be debited to Capital Account during next five years is as under:—

Year.	Probable consumption of		Remarks.
	Rails in tons.	Fishplates in tons.	
1926-27 . . .	57,410	3,530	This includes 45 miles carried forward from 25-26 renewals.
1927-28 . . .	43,850	1,400	
1928-29 . . .	43,850	1,400	
1929-30 . .	43,850	1,400	
1930-31 . . .	43,850	1,400	

Answer 3.—(1) The following rails and fishplates are to be supplied by Messrs. Tata Iron and Steel Company during 1926-27:—

Year.	Price per ton.		To be supplied by Messrs. Tata Iron and Steel Company.	
	Rails.	Fishplates.	Rails in tons.	Fishplates in tons.
	Rs.	Rs.		
1926-27	130	160	57,350	3,155

(2) 5,400 pieces, *i.e.*, 10,800 Nos. of combination fishplates will be supplied by Messrs. Burn & Co. of Howrah during 1926-27 at Rs. 6-12 each f.o.r. Howrah.

(3) The following rails and fishplates have been arranged through Director General, Stores, London, during 1926-27:—

(*a*) Rails steel 60 lbs. F. F. B. S. S. treated by Sandberg Sorbitic process 60 tons at Rs. 152 per ton. To be supplied during 1926-27.

(*b*) 52,500 fishplates for 82 lbs. B. N. and 75 lbs. 1887 and 1892 type, arranged through Director General, Stores at Rs. 168 per ton approximately. To be supplied during 1926-27.

(*c*) 1,000 pairs combination fishplates (Manganese Steel) for new and old B. S. 90 lbs. rails at Rs. 11-10 each. First consignment of 200 to 300 pairs to reach India before June 1926.

The existing Railway Board contract with Messrs. Tata Iron and Steel Company ends 31st March 1927 and it is not known what further contracts have been entered into. This contract was for a period of 7 years commencing from the 1st day of April 1920.

Answer 4.—(*a*) Continental rails and fishplates have not so far been purchased. As regards purchases in future from the continents, the Railway Board may kindly be addressed.

(*b*) Does not arise.

Answer 5.—Continental rails and fishplates have not been purchased up to this. Indian rails have not been in use long enough to compare with English rails; English rails have a world wide reputation for wear, resilience and elasticity; this has been fully borne out on this railway. English rails taken out of the track after 40 years use were found to have lost two to three pounds in weight only.

Answer 6.—Purchases of rails and fishplates, on which duty is payable, have recently been made only when such materials are required either for experimental purposes or they are of a type not rolled by Tatas.

In the absence of any alteration to the present policy regarding the purchase of rails and fishplates any increase in the present duty on rails or fishplates would not affect the annual expenditure of the railway to any large extent.

Answer 7.—No remarks.

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10. SOUTH INDIAN RAILWAY COMPANY, LIMITED.

Letter, dated the 22nd June 1926.

I have the honour to subjoin my replies to the questionnaire enclosed with your letter No. 210 of the 7th May 1926.

1. Statement shewing the quantities and the price per ton of rails and fishplates purchased by the South Indian Railway (Open Line) during the last 5 years commencing from 1921-22:—

Year.	Rails.		Fish plates.		Country of origin.
	Tons.	C.I.F. Price per ton.	Tons.	C.I.F. Price per ton.	
1921-22	11,065	Rs. 139-1-2 or £9-1-3	589	Rs. 183-1-11 or £11-18-8	British.
1922-23	1,727	Rs. 138-9-8 or £9-11-6	78	Rs. 225-5-3 or £15-11-4	Do.
1923-24	167	Rs. 154-2-5 or £9-18-7	11	Rs. 220-12-11 or £14-14-5	Do.
1924-25	2,260	Rs. 143-8-0	...	.....	Indian (Tatas).
1925-26	2,963	Rs. 143-8-0	116	Rs. 146-0-0	Do.
1925-26	1,218	Rs. 143-13-6 or £9-11-10	365	Rs. 204-14-7 or £13-13-3	British.

2. Statement shewing the probable consumption of rails and fishplates by the South Indian Railway, Open Line (including Remodelling and Madras

Improvements) and Construction, during the next five years commencing from 1927-28 is given below:—

Year.	RAILS.			FISH-PLATES.		
	Open Line.		Construction.	Open Line.		Construction.
	Capital.	Revenue.	Capital.	Capital.	Revenue.	Capital.
	Tons.	Tons.	Tons	Tons.	Tons.	Tons.
1927-28 . . .	1,035	3,915	21,764	38	149	993
1928-29 . . .	635	4,223	16,501	25	159	637
1929-30 . . .	16	2,448	12,745	1	92	406
1930-31 . . .	149	3,576	17,000	6	137	682
1931-32 . . .	149	3,576	8,758	6	137	266

3. No.

4. (*a*) No rails and fishplates are purchased from the continent.

(*b*) Does not arise.

5. The rails and fishplates manufactured in Great Britain are giving satisfactory service.

With regard to those purchased in India it is too early to submit a report as they have not been in the line sufficiently long.

6. The extent to which annual Capital expenditure will be increased by each Rs. 5 increase in duty is as under:—

	Rs.
1927-28	1,39,470
1928-29	1,10,900
1929-30	78,540
1930-31	1,07,750
1931-32	64,460

7. I have no remarks to offer.

XVII.—Questionnaires issued by the Tariff Board to the Railway Board and Railways.

Steel materials other than rails and fishplates.

1. The various classes of steel and wrought iron materials other than rails and fishplates on which protective duties are at present imposed are as follows:—

Rolled steel (including beams, angles, channels, plates, bars and rods, sheets black and galvanized).

Wire and Wire-nails.

Tinplates.

Fabricated steel.

Kindly state, as far as possible, the quantities and prices of each of these classes of material purchased by your railway for each year from 1921-22 to 1925-26 distinguishing the country of origin. For purchases made in Great Britain and on the Continent, kindly state, as far as possible the sterling f.o.b. price and the charges for freight, landing, etc., separately. If this is not possible, kindly state the c.i.f. price in sterling.

2. To what extent has the annual capital or revenue expenditure of your railway been increased by the imposition of the protective duties? Has the imposition of the duties affected your purchases of the various classes of material? To what extent is their maintenance at the present level likely to affect your future purchases?

3. What do you estimate as the probable consumption of the various classes of material by your railway during the next five years?

4. Have you entered into any contract for the supply of any of these classes of material from 1926-27 onwards? If so, please give full particulars of such contracts stating especially their duration, the quantities contracted for, the prices fixed under the contract and the country of origin?

5. If you have purchased or propose to purchase any of the materials mentioned above on the Continent, kindly state fully the considerations which have influenced you in doing so.

6. What has been your experience in regard to the quality of any or all of these materials manufactured in Great Britain, the Continent and India respectively?

XVIII.—Replies to questionnaires regarding steel materials and other

1. ASSAM BENGAL RAILWAY COMPANY, LIMITED.

Letter, dated the 26th June 1926.

With reference to your letter No. 217, dated the 8th May 1926, I have the honour to forward herewith for your disposal a copy of my Superintendent of Stores' letter No. M.-50-D., dated the 15th June 1926, and enclosure containing replies to the questionnaire relating to the purchase of the above and to say that I am in general agreement with it.

COPY.

ASSAM BENGAL RAILWAY COMPANY, LIMITED.

(Incorporated in Great Britain.)

OFFICE OF THE SUPERINTENDENT OF STORES.

Pahartali, 14th/15th June 1926.

Ref. No. M.-50-D.

To

THE AGENT.

Purchase of steel material other than rails and fishplates.

Your No. 36/18 of 13th May 1926.

Dear Sir,

1. With reference to the questionnaire from the Tariff Board sent under cover of your above, I enclose herewith statement giving the quantities and prices of each of the classes of material asked for purchased during the year 1922 to 1925 inclusive. The Tariff Board ask to distinguish the country of origin. I have not been able to do this as to obtain the information will mean that each local purchase order will have to be looked up which I can only do for the years 1924 and 1925 as all copies of orders are destroyed after two years. It is almost impossible to give the information asked for with any degree of accuracy however much time is spent in trying to collect same. It is common knowledge that a large proportion of the bars and rods at any rate, that are marketted in Calcutta are of Continental origin which are often sold under the name of British manufacture. Against this we have no protection as, with the exception of Messrs. The Tata Iron and Steel Company, I know of no manufacturer who brands small sections of bars and rods. During the years under review we have made practically no purchases direct either from Great Britain or the Continent of any of the items mentioned with the exception of fabricated steel details of which are given in attached statement and also spring steel. Since 1924 all spring steel sections are of British manufacture bought through Firms in Calcutta or direct from Home. As all these bars are stamped we can rely on them being of the make they purport to be. Previous to this date we obtained certain sections of spring steel from Messrs. Tatas. I had however cause to complain of their sections not being rolled dead to size and after correspondence on the subject the Firm wrote that they were afraid that it was not of any use trying to supply steel flats to our satisfaction the work being outside their ordinary lines.

2. To-day Messrs. The Tata Iron and Steel Company do not under-quote British and Continental rollings so that the annual capital and revenue expenditure of this Railway has been increased by the full amount of the protective duties imposed.

As far as revenue is concerned the imposition of the duties has not affected our purchases as revenue repairs must be carried out whatever price iron and steel is being marketted at.

As regards capital those constructions and capital works which have been sanctioned have to be supplied with iron and steel. As to whether further capital works would have been sanctioned if the rate for steel sections had been lower I am not in a position to state but with the Railway Board demanding us to show a return of 6 per cent. on capital outlay before they will sanction same the impositions of the duties must affect our purchases.

The conclusion of the answer to the preceding question I think covers the reply to the question as to what extent is the maintenance of the duties at the present level likely to affect our future purchases. If we can show a return of 6 per cent. presumably the constructions will be sanctioned, if we cannot they will not, so that every increase in the price of iron and steel reduces the number of constructions sanctioned. To what extent however I am unable to give even an approximate estimate.

3. If the Railway Board will lay down a complete construction programme for the next five years we might possibly estimate with some degree of accuracy. Without this information it seems futile to give any estimate. Our normal consumption for the next five years excluding constructions might be taken as the average for the year 1925.

4. We have not entered into any contracts for the supply of any of the classes of material from 1926-27 onwards.

5. Please see reply to paragraph 4.

6. We have not knowingly purchased from the Continent any of the materials mentioned and as far as I am aware do not propose to do so. Messrs. Tatas rollings when to B. S. S. are good enough for our general run of work but the fact of their turning out material other than to B. S. S. does not afford that feeling of security that I consider we are entitled to when dealing with a bounty-fed Company. We know that sections turned out by the well-known British Firms are absolutely reliable and are always up to the weight and specification of the section. I specially mention this as have come across two instances in which angle iron sections of Continental rolling have been found on weighment not to be to the weight of the section it is being sold under.

Yours faithfully,

Sd. E. W. THOMAS,
Ag. Superintendent of Stores.

Statement of purchase of Steel material other than Rails and Fishplates.

Description.	1922.		1923.		1924.		1925.	
	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.
	Cwt.	Rs.	Cwt.	Rs.	Cwt.	Rs.	Cwt.	Rs.
1. Beams	736	6,628	1,287	11,583	1,622	14,604	840	7,350
2. Angles and Tees	576	5,476	414	3,933	1,189	10,525	925	7,839
3. Channels	152	1,370	48	434	72	578	92	782
4. Plates including black sheets	639	6,397	249	2,492	443	3,767	566	4,534
5. Bars and rods (Flats, round and square)	2,143	19,687	1,275	11,684	2,408	20,800	2,495	21,209
6. Bars (Spring steel) purchased in India	889	12,223	531	7,308	362	4,126	988	11,208
6a. Bars (Spring steel) purchased direct from England.	*Nil.*	...	*Nil.*	...	400	5,934	360	3,972
7. Sheets galvanized both corrugated and plain	680	11,924	1,060	18,806	1,160	19,918	1,440	22,479
8. Wire and wire nails (iron only)	360	21,171	260	8,312	245	5,748	387	11,308
	Sheets.		Sheets.		Sheets.		Sheets.	
9. Tin plates	1,914	2,614	1,816	2,353	343	377	868	899
	Cwt.		Cwt.		Cwt.		Cwt.	
10. Fabricated steel purchased in India	1,580	28,387	8,120	1,39,664	2,580	40,635	8,720	1,24,696
10a. Fabricated steel purchased direct from England.	2,160	24,948	*Nil.*	*Nil.*	2,360	31,152	16,880	1,94,120

Note.—English rates for fabricated steel do not include duty.

2. BENGAL NAGPUR RAILWAY.

Letter, dated 8th October 1926.

With reference to your letter No. 217, dated the 8th May 1926, I beg to send herewith six copies of my replies to Tariff Board questionnaire regarding steel materials other than rails and fishplates.

STATEMENT A

Local Purchase.

Year.		Rolled Steel.	Wire.	Wire Nails.	Tin Plates.	Remarks.
1921-22	Quantity	Tons 866-4-2-13	Tons 8-8-3-0	Tons 30-8-1-2	448 sheets.	
	Value	Rs. 3,02,015-13-0	Rs. 5,617-6-0	Rs. 23,042-10-0	Rs. 126-0-0	
	Rate	Rs. 348-12-0 per ton.	Rs. 702-0-0 per ton.	Rs. 768-0-0 per ton.	Re. 0-4-6 per sheet.	
1922-23	Quantity	Tons 1,138-0-0-0	Tons 14-18-1-0	Tons 10-2-3-14	5,900 sheets.	
	Value	Rs. 3,81,034-4-0	Rs. 753-0-0	Rs. 3,249-0-0	Rs. 5,207-13-0	
	Rate	Rs. 334-0-0 per ton.	Rs. 502-0-0 per ton.	Rs. 325-0-0 per ton.	Re. 0-14-0 per sheet.	
1923-24	Quantity	Tons 1,659-14-0-0	Tons 14-5-0-0	Tons 6-19-0-23	7,067 sheets.	
	Value	Rs. 4,28,226-15-0	Rs. 5,826-0-0	Rs. 2,101-6-0	Rs. 4,234-3-0	
	Rate	Rs. 258-2-0 per ton.	Rs. 409-4-0 per ton.	Rs. 300-0-0 per ton.	Re. 0-7-0 per sheet.	
1924-25	Quantity	Tons 1,594-7-3-0	Tons 17-16-3-0	Tons 8-3-3-11	15,917 sheets.	
	Value	Rs. 3,47,933-3-0	Rs. 6,422-5-0	Rs. 2,337-6-0	Rs. 7,993-7-0	
	Rate	Rs. 218-0-0 per ton.	Rs. 379-0-0 per ton.	Rs. 292-0-0 per ton.	Re. 0-8-0 per sheet.	
1925-26	Quantity	Tons 1,619-13-0-0	Tons 16-5-0-0	Tons 7-19-0-2	3,954 sheets.	
	Value	Rs. 3,09,846-0-0	Rs. 4,093-0-0	Rs. 1,921-14-0	Rs. 1,583-14-0	
	Rate	Rs. 191-6-0 per ton.	Rs. 255-11-0 per ton.	Rs. 240-0-0 per ton.	Re. 0-6-0 per sheet.	

STATEMENT B.

Purchased from England.

No.	Particulars	1921-23.			1922-23.			1923-24.			1924-25.			1925-26.			Remarks.
		Quantity.	Value.	Rate per ton.	Quantity.	Value.	Rate per ton.	Quantity.	Value	Rate per ton.	Quantity.	Value.	Rate per ton.	Quantity.	Value.	Rate per ton.	
		Ton.	£ s. d.	£ s. d.	Ton.	£ s. d.	£	T. C.	£ s. d.	£ s. d.	T. C.	£ s. d.	£ s. d.	Ton.	£ s. d.	£ s. d.	
1	Rolled steel	...	...	...	...	...	...	1,476 10	20,064 7 0	10 13 9	796 3	12,805 4 3	16 1 9	384	5,451 14 9	14 4 0	The price quoted is C.I.F.
2	Wire	...	...	...	...	...	...	7 0	193 3 4	27 11 11	...	...	...	30	42 10 9	14 3 7	
3	Wire Nails	No receipt received from England during these five years.								...	...	...	...	...	...	...	
4	Tin Plates	...	...	...	...	...	...	...	...	...	...	...	...	Sheets 5,510	203 10 1	Each sheet 0 0 9	

Answer to Question No. 1.

List showing "Fabricated Steel" purchased by B. N. Ry. from year 1921-22 to 1925-26.

1	2	3	4	5	6	7	8	9	10	11	12	13	14
										Summary.			
Country of Origin.	Year.	Weight.	Cost F.O.R. or F.O.B.	Shipping and Insurance.	Landing.	Commission.	Railway Freight.	Unloading.	Custom's duty.	Cost in India	Cost in Great Britain.	Cost in Continent.	Shipping, etc.
		Ton cwt. qr.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs A. P.	Rs. A. P.	Rs. A P.	Rs. A. P.	Rs.	£.	£.	Rs.
India . . .	1921-22 .	102 8 1	40,338 0 0	...	...	...	...	...	...	40,338	...	...	...
Great Britain . .	1921-22 .	3,595 18 2	£ s. d. 50,279 0 0	1,24,975 1 7	10,786 3 0	981 5 2	66 14 0	3,656 6 7	67,082 6 0	...	50,379	...	2,07,548
India . . .	1922-23 .	1,141 10 2	Rs. A. P. 4,43,917 11 0	...	...	...	...	...	...	4,43,918	...	...	...
Great Britain . .	1922-23 .	6,899 8 3	£ s. d. 92,257 0 0	2,41,414 7 8	20,367 7 0	1,682 11 0	175 11 0	6,966 14 9	1,22,501 2 9	...	92,[illegible]	...	3,53,108
India . . .	1923-24 .	1,366 19 1	Rs. A. P. 4,58,335 0 0	...	...	...	...	...	...	4,58,335	...	...	...
Great Britain . .	1923-24 .	7,709 5 0	£ s. d 1,04,240 16 0	2,63,338 11 0	22,570 6 0	2,930 13 10	38 4 0	7,654 10 9	1,54,157 12 0	...	1,04,240	...	4,45,700
India . . .	1924-25 .	1,849 0 2	Rs. A. P. 6,02,751 0 0	...	...	...	...	...	...	6,02,351	...	...	...
Great Britain . .	1924-25 .	6,193 10 0	£ s. d. 71,436 15 0	1,94,644 0 2	17,093 0 9	1,327 2 0	23 7 0	5,650 11 0	1,08,300 4 0	...	71,436	...	3,63,378
Continent (Germany)	1924-25 .	320 2 2	£ s. d. 4,116 0 0	16,246 12 11	809 3 2	7 5 4	9 7 0	247 0 0	19,021 15 0	...	...	4,116	...
India . . .	1925-26 .	1,186 10 0	Rs. A. P. 3,62,584 0 0	...	...	...	...	...	...	3,02,584	...	...	...
Great Britain . .	1925-26 .	5,481 3 1	£ s. d. 38,411 12 3	1,94,430 4 11	16,378 0 0	1,308 10 0	18 13 0	5,605 3 0	1,04,347 0 0	...	28,411	...	3,22,087

3. BOMBAY, BARODA AND CENTRAL INDIA RAILWAY COMPANY.

Letter, dated the 17th July 1926.

With reference to your letter No. 217 of 8th May 1926, I beg to send herewith a copy with six spare copies of my replies to the questionnaire relating to the purchase by this administration of steel materials other than rails and fishplates.

In this connection, I am to remark that wherever it has not been possible to give very precise information according to the details asked for in the questionnaire, explanatory remarks have been made in the replies wherever necessary.

Question 1.—The following is the statement showing purchases made in India and England during the years 1921-22 to 1925-26 of rolled steel, wire and wire nails, tin plates, and fabricated steel:—

Description.	Year.	Purchases in India.		Purchases in England through Home Board.			
		Quantity.	Amount.	Quantity.	Sterling value C. I. F.	Customs duty.	Landing and Dock charges.
1	2	3	4	5	6	7	8
		Tons.	Rs.	Tons.	£	Rs.	Rs.
Rolled steel	1921-22	2,673	6,72,531	4,528	70,850	47,841*	23,200
	1922-23	2,781	6,16,218	1,695	21,141	30,717*	9,418
	1923-24	2,232	4,17,015	2,291	28,003	40,930*	10,994
	1924-25	1,905	3,53,709	5,595	64,410	1,81,206	23,022
	1925-26	2,106	3,78,583	6,302	68,943	2,04,840	22,076
Wire and wire nails	1921-22	60	43,456	70	2,754	1,111*	323
	1922-23	46	16,520	13	662	942*	47
	1923-24	60	22,066	88	2,800	4,103*	280
	1924-25	132	57,258	28	784	1,450	241
	1925-26	104	42,114	158	4,049	5,790	530

NOTE—(1) * these amounts represent the customs duty actually paid but subsequently refunded when Railway material was considered as Government stores.

(2) The value of stores shown in column (4) is for free delivery, at Mahalakshmi depôt in the case of rolled steel, wire and tin plates and for F. O. R. Bombay, Howrah, etc., in the case of fabricated steel.

(3) The charges shewn in column (8) do not include Railway freight, handling and transhipment, etc., charges till the material reaches the respective destinations.

Description.	Year.	Purchases in India.		Purchases in England through Home Board.			
		Quantity.	Amount.	Quantity.	Sterling value C.I.F.	Customs duty.	Landing and Dock charges.
1	2	3	4	5	6	7	8
		Nos.	Rs.	Tons.	£	Rs.	Rs.
Tin plates	1921-22	1,700	2,310	4	205	160*	16
	1922-23	5,576	6,928	·45 (9cwts.)	20	20*	3
	1923-24	4,465	6,344	...	...	...	...
	1924-25	1,462	2,018	19·61	868	1,178	126
	1925-26	9,650	7,790	2·76	116	235	·15
		Tons.					
Fabricated steel.	1921-22	43	14,484	1,633	63,590	29,778*	13,292
	1922-23	51	18,675	954	17,015	28,325*	7,261
	1923-24	86	28,473	5,890 (a)	11,417	1,61,231*	46,072
	1924-25	34	12,499	590 (a)	11,459	20,668	4,860
				514 (b)	7,552	25,723	2,193
	1925-26	51	18,364	436 (c)	6,837	23,240	2,600
		Spans 302= Tons 265	95,335	544	10,540	24,039	3,319
		64	20,191	497 (d)	9,922	25,042	2,986

(a) Includes steel girders, etc., for the Bassein Bridges, but not C. I. cylinders and C. S. screws.

(b) Germany.

(c) Belgium.

(d) For electrification (steel work for sub-stations and overhead track Bridge structures).

Note—(1) * these amounts represent the customs duty actually paid but subsequently refunded when Railway material was considered as Government stores.

(2) The value of stores shown in column (4) is for free delivery at Mahalakshmi depôt in the case of Rolled steel, wire and tin plates and for F. O. R. Bombay, Howrah, etc., in the case of fabricated steel.

(3) The charges shown in column (8) do not include Railway freight, handling and transhipment, etc., charges till the material reaches the respective destinations.

Rolled steel.—With regard to purchases in India of rolled steel, it is not now possible to state the country of origin; rolled steel purchased locally is generally of continental origin and that purchased in England by the Home Board is from British firms and it is presumed is mostly of British manu-

facture. The principal British firms who supplied us the rolled steel during the past 4 years were:—

(1) P. & W. MacLellan, L. T. D.
(2) J. F. Donald & Co.
(3) H. K. Skelton.
(4) Dorman, Long & Co.
(5) Smith and Maclean.
(6) John Walsh & Co.

Wire and wire nails.—The figures given for wire and wire nails include signal and fencing wire, with the exception of nails which are probably of Belgium origin and have always been purchased locally, the country of origin for signal and fencing wires is not known but is believed to be English.

Tin plates.—These were of British origin.

Fabricated steel purchased in India.

A large portion of fabricated steel is purchased by Engineering Departments direct for construction of overbridges, etc., and they are not in a position to ascertain the total quantity purchased. The figures in columns (3) and (4) do not, therefore, include all the fabricated steel used by this Railway Company. The girders and steel work purchased locally were all of British materials and ordered on the following firms:—

(1) Richardson & Cruddas.
(2) Jessop & Co.
(3) Braithwaite & Co.
(4) Alcock, Ashdown & Co.

Question 2.—(*a*) It is difficult for various reasons to give even an approximate estimate of the increase in the annual Capital and Revenue expenditure due exclusively to the imposition of the protective duties which came in force since June 1924 just two years back.

Assuming that duty would remain the same as before The Steel Industry (Protection) Act, and working on the purchases of 1924-25 and 1925-26 (as shown in reply to question 1 above) at an average rate of Customs duty, the increase would be as follows:—

	Rs.	
(*a*) Rolled steel—		
1924-25	1,02,188	
1925-26	1,26,144	
(*b*) Tin plate and wire and wire nails—not ascertainable.		
(*c*) Fabricated steel—		
1924-25	15,949	
1925-26	16,404	
TOTAL .	2,60,685	
Add for material indirectly affected and for material not included in the statement .	40,000	
Approximate .	3,00,000	for 2 years.
or .	1,50,000	per year.

Question 2 (*b*).—The imposition of the duties has not so far affected the purchases of the various classes of material by this Railway. We continue to obtain our material in the usual way as before. If, however, the duty becomes excessive our purchases may be curtailed as it will not be a financial proposition to carry out intended works or substitute will have to be resorted to.

(*c*) The present duties will not it is considered affect our purchases except perhaps in a very minor degree.

Question 3.—Our purchases during the next 3 years will be approximately the same as an average as the last 5 years which have been given in the answer to Question 1.

Question 4.—The only large contract is for the girder work for Mahalakshmi road overbridge fixed at Rs. 2,88,000. Country of origin Great Britain.

Question 5.—Material purchased by the Home Board is sometime purchased from the Continent. I assume the contract is given on price if other conditions are equal.

Question 6.—I have no remarks to make neither are any remarks offered by the Engineering Department.

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4. BURMA RAILWAYS COMPANY, LIMITED.

Letter, dated the 12th July 1926.

I forward my replies (so far as I am able to furnish them) to the following questionnaires :—

(*b*) Section—other Steel (received with your letter No. 217, dated the 8th May 1926).

2. Where views are expressed they are not necessarily those of my Home Board.

3. A copy goes to the Railway Board.

(Replies to Tariff Board's letter No. 217, dated 8th May 1926.)

SECTION—OTHER STEEL.

1. Two statements giving the required information are attached.

2. It would be a difficult matter to answer this question correctly as the duty of late years has fluctuated.

3.

4. No contracts have been entered into for the supply of steel materials from 1926-27 onwards.

5. We have made no purchases of steel material on the continent. Whether it is proposed to purchase any in the future is a matter which rests with the Home Board.

6. *Nil.*

Enclosure No. 1.

Question No. 1.

Statement of Steel Sections.

Year.	C. I. Sheets of Sizes.		Plain Steel Sheets Galvanised of sizes.		Mild Steel Plates of Sizes.		Mild Steel Bars Flat of Sizes.		Wire Nail of Sizes.		Mild Steel Angles of Sizes.	
	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.
	Tons.		Tons.		Tons.		Tons.		Tons.		Tons.	
1921-22 . . .	40	£23-3-9 per ton.	*Nil*	...	83	From £13-11-3 to £20-8-9 per ton.	39	From £12-1-3 to £16-11-3 per ton.	2	From £1-12-3 to £1-15-3 per cwt.	73	From £10-11-3 to £16-1-3 per ton.
1922-23 . . .	213	From £18-13-6 to £19-14-9 per ton.	23	£20-13-9 per ton.	243	From £10-1-3 to £14-3-9 per ton.	236	From £10-2-6 to £10-18-9 per ton.	...	...	188	From £9-1-3 to £12-1-3 per ton.
1923-24 . . .	36	From £24-3-9 to £24-13-9 per ton.	12	£29-6-3 per ton.	50	From £10-1-3 to £14-16-3 per ton.	348	From £9-18-9 to £14-6-3 per ton.	3	From £0-19-9 to £1-2-5 per cwt.	101	From £9-11-3 to £13-6-3 per ton.
1924-25 . . .	137	From £23-11-3 to £24-3-9 per ton.	5	£25-1-3 per ton.	97	From £10-16-3 to £13-13-9 per ton.	97	From £9-12-6 to £11-6-3 per ton.	3	From £1-1-7½ to £1-5-3 per cwt.	...	..
1925-26 . . .	69	From £21-3-9 per ton.	...	...	110	From £8-15-0 to £11-18-9 per ton.	233	From £8-14-9 to £9-1 3 per ton.	2	From £0-18-1¼ to £0-19-1¼ per cwt.	274	From £8-2-3 to £11-6-3 per ton.

Enclosure No. 2.

Question No. 1.

Statement of Steel Sections imported from England.

Year.	Mild Steel Channels of Sizes.		Wire Strand Galvanised 450 yards per Coil 14 B. W. G., 7 strand.		Wire Signal 17 × 7 Ply.		Mild Steel Rods of Sizes.		Tin Plates 20″ × 14″ and 36″ × 30″.		Steel Joists.	
	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.	Quantity purchased.	C.i.f. Rate.
	Tons.		Tons.				Tons.			£ s. d.	Tons.	
1921-22 . .	185	From £10-15-0 to £16-16-3 per ton.	30	£55-0-0 per ton.	2 tons	£50-3-9 per ton.	104	From £15-18-9 to £17-11-3 per ton.	Sheets 20″ × 14″=100 36″ × 30″=200	4 5 0 % 18 5 0 %	17	£16-13-9 per ton.
1922-23 . .	312	From £9-7-6 to £10-12-6 per ton.	...	...	...	...	234	From £9-18-9 to £11-18-9 per ton.	Sheets 20″ × 14″=1,000 36″ × 30″=100	3 19 6 % 13 5 0 %	...	...
1923-24 .	688	£10-6-3 per ton.	...	...	5 cwts	£42-13-9 per ton.	299	From £9-18-6 to £16-6-3 per ton.	Sheets 20″ × 14″=1,550 36″ × 30″=144	4 1 6 % 12 0 0 %	...	...
1924-25 . .	323	From £9-13-3 to £9-17-6 per ton.	...	...	7 tons	From £37-8-9 to £38-13-9 per ton.	159	From £10-6-3 to £13-11-3 per ton.	Sheets 20″ × 14″=1,000 36″ × 30″=144	5 17 6 % 10 5 0 %	...	...
1925-26 . .	668	From £8-11-6 to £10-7-6 per ton.	16	£29-5-0 per ton.	2 ,,	£37-13 9 per ton.	280	From £9-1-3 to £13-3-3 per ton.	Sheets 20″ × 14″=804 36″ × 30″=180	3 4 6 % 13 8 6 %	...	...

5. EASTERN BENGAL RAILWAY.

Letter, dated the 11th September 1926.

Subject:—Questionnaire concerning steel material other than rails and fishplates.

With reference to your letter No. 217, dated 8th May 1926, I enclose herewith a statement containing the information required by the Tariff Board on the abovementioned subject.

Reply to Questions.

1. The quantities and prices of the materials referred to have been shown year by year from 1921-22 to 1925-26 in Annexures A, B, C, D, E.

The f.o.b. sterling prices have also been quoted in the Annexures.

2. (*a*) Revenue expenditure has increased by approximately 10 per cent.

(*b*) Yes.

(*c*) To the extent of approximately 15 per cent.

3. Reply given in Annexure F.

4. No.

5. The principal consumption under this head has been in fabricated steel (girders, steel sheds, etc). These are manufactured locally out of sections rolled by Messrs. The Tata Iron and Steel Company supplemented by materials imported from England in case in which Messrs. The Tata Iron and Steel Company cannot supply them.

6. There has hitherto been no noticeable difference in the quality of the materials supplied by Messrs. The Tata Iron and Steel Company and those imported from England.

No such materials have been obtained from the continent.

ANNEXURE A.

Steel material other than rails and Fish Plates purchased in 1921-22.

Description of Stores.	Purchase made in India.		Purchase made through the Agency of the India Office.				
	Quantity.	Rate per cwt.	Quantity.	Price per cwt. F. O. B.	Price per cwt. Freight insurance and Port Charges.	Price per cwt. c. i. f.	Protective duty.
	Cwt.	Rs. A. P.	Cwt.	£ s. d.	£ s. d.	£ s. d.	@ per
1. Rolled steel (including beams, angles, channels, bars rods).	5,605	13 0 0	...	...	...	...	...
2. Rolled steel plates	757	17 0 0	1,227	0 10 0	0 1 0	0 11 0	*Nil.*
3. Do. sheets, black	654	13 0 0	...	...	...	...	...
4. Do. do. galvanized	227	20 0 0	390	1 0 0	0 2 0	1 2 0	*Nil.*
5. Mild steel wire, black and galvanized . .	22	23 0 0	...	...	...	...	...
6. Tin plates do.	...	...	...	...	...	...	...
7. Nails, iron wire, French	104	30 0 0	...	...	...	...	...

ANNEXURE B.

Steel material other than rails and Fish Plates purchased in 1922-23.

Description of Stores.	Purchase made in India.		Purchase made through the Agency of the India Office.				
	Quantity.	Rate per cwt.	Quantity.	Price per cwt.			Protective duty.
				F. O. B.	Freight insurance and Port Charges.	c. i. f.	
	Cwt.	Rs. A. P.	Cwt.	£ s. d.	£ s. d.	£ s. d.	@ per
1. Rolled steel (including beams, angles, channels, bars rods).	9,503	9 0 0	144	0 11 0	0 1 0	0 12 0	*Nil.*
2. Rolled steel plates	2,342	10 0 0	1,357	0 10 0	0 1 0	0 11 0	*Nil.*
3. Do. sheets, black	2,121	10 0 0	768	0 11 0	0 1 0	0 12 0	*Nil.*
4. Do. do. galvanized	...	...	223	1 0 0	0 2 0	1 2 0	*Nil.*
5. Mild steel wire, black and galvanized . .	93	26 0 0	...	...	...	..	..
6. Tin plates do.	No. 332	160 box of 50	No. 400	3 14 0 for 50	0 7 5	4 1 5 for 50	*Nil.*
7. Nails, iron wire, French	152	20 0 0	...	...	...	...	...

ANNEXURE C.

Steel material other than rails and Fish Plates purchased in 1923-24.

Description of Stores.	Purchase made in India.		Purchase made through the Agency of the India Office.				
	Quantity.	Rate per cwt.	Quantity.	Price per cwt.			Protective duty.
				F. O. B.	Freight insurance and Port Charges.	c. i. f.	
	Cwt.	Rs. A. P.	Cwt.	£ s. d.	£ s. d.	£ s. d.	@ per
1. Rolled steel (including beams, angles, channels, bars rods).	10,104	9 0 0	224	0 10 0	0 1 0	0 11 0	*Nil.*
2. Rolled steel plates	2,182	10 0 0	1,524	0 10 0	0 1 0	0 11 0	*Nil.*
3. Do. sheets, black	424	8 4 0	583	0 12 0	0 1 3	0 13 3	*Nil.*
4. Do. do. galvanized	65	21 8 0	26	1 4 0	0 2 5	1 6 5	*Nil.*
5. Mild steel wire, black and galvanized . .	130	20 0 0	20	1 2 0	0 2 3	1 4 3	*Nil.*
6. Tin plates do.	...	...	No. 1,000	3 14 0 for 50	0 7 5	4 1 5 for 50	*Nil.*
7. Nails, iron wire, French	313	20 0 0	Cwt. 44	1 0 0	0 2 0	1 2 0	*Nil.*

ANNEXURE D.

Steel material other than rails and Fish Plates purchased in 1924-25.

Description of Stores.	Purchase made in India.		Purchase made through the Agency of the India Office.				
	Quantity.	Rate per cwt.	Quantity.	Price per cwt. F. O. B.	Freight insurance and Port Charges.	c. i. f.	Protective duty.
	Cwt.	Rs. A. P.	Cwt.	£ s. d.	£ s. d.	£ s. d.	@ per £ r. d.
1. Rolled steel (including beams, angles, channels, bars rods).	13,198	10 0 0	20	0 10 0	0 1 0	0 11 '0	0 1 1 per cwt.
2. Rolled steel plates	2,927	8 8 0	408	0 10 9	0 1 1	0 11 10	0 1 2 per cwt.
3. Do. sheets, black	854	8 8 0	...	...	...	...	...
4. Do. do. galvanized . . .	42	19 0 0	...	...	...	...	...
5. Mild steel wire, black and galvanized . .	51	16 0 0	2	1 2 3	0 2 3	1 4 6	0 2 5 per cwt.
6. Tin plates do.	No. 1,499	74 0 0 per box of 50.	...	...	...	..	...
7. Nails, iron wire, French	79	18 0 0	27	1 0 0	0 2 0	1 2 0	0 2 3 per cwt.

ANNEXURE E.

Steel material other than rails and Fish Plates purchased in 1925-26.

Description of Stores.	Purchase made in India.		Purchase made through the Agency of the India Office.				
	Quantity.	Rate per cwt.	Quantity.	Price per cwt.			Protective duty.
				F. O. B.	Freight insurance and Port Charges.	c. i. f.	
	Cwt.	Rs. A. P.	Cwt.	£ s. d.	£ s. d.	£ s. d.	@ per
1. Rolled steel (including beams, angles, channels bars rods.	17,931	9 0 0	...	...	...	...	...
2. Rolled steel plates	7,549	8 12 0	...	...	...	...	...
3. Do. sheets black	3,278	8 12 0	...	...	...	...	...
4. Do. do galvanized	341	15 10 0	...	...	...	...	...
5. Mild steel wire, black and galvanized . .	140	15 0 0	...	...	...	...	...
6. Tin plates do.	No. 2,455	74 0 0 per box of 50	...	...	...	...	...
7. Nails, iron wire, French	177	15 0 0	...	...	...	...	...

ANNEXURE F.

Statement showing probable consumption of various classes of materials during the next five years.

——	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.
	Tons.	Tons.	Tons.	Tons.	Tons.
1. Rolled steel (including beams, angles, bars, etc.)	565	580	600	620	650
2. Rolled steel plates . .	200	210	220	235	250
3. Do. sheets, black .	87	95	100	105	110
4. Do. do. galvanized.	13	14	15	16	18
5. Mild steel wire, black and galvanized.	4	4½	5	5½	6
6. Tin plates	No. 1,150	No. 1,200	No. 1,250	No. 1,300	No. 1,400
7. Wire Nails . . .	T. 9	T. 9½	T. 10	T. 10½	T. 11

6. EAST INDIAN RAILWAY.

Letter, dated the 19th July 1926.

With reference to your letter No. 217, dated the 8th May 1926 regarding the questionnaire relating to the purchase of steel materials other than rails and fishplates by this Railway, I beg to reply you *in seriatim*:—

(1) Two statements one showing the purchases made in the country during each year from 1922 to 1925 and the other showing the importation from abroad with f.o.b. cost separate from charges for freight, landing, etc., and distinguishing the country of origin are enclosed. It is not practicable to differentiate between indigenous manufactured material and imported material from among the purchases made in the country owing to records not being available. It may, however, be taken that the major portion of the purchases are of country origin.

(2) During the year 1925-26 the Capital and Revenue expenditure of this railway was increased by Rs. 2,65,000 by the imposition of the enhanced protective duties as shown below:—

	Rs.
Rolled sections	92,696
Nails	1,236
Wire	1,224
Tin sheets	1,794
Fabricated steel	1,68,433
TOTAL .	2,65,000

The imposition of the duties did not affect the purchases of the various classes of materials.

(3) The estimated consumption for the next 5 years of the various classes of materials in question is as follows:—

	Tons.
Rolled sections	25,000
Wire	400
Nails	200
Tinned sheets	175,000
Fabricated steel	67,000

(4) No.

(5) From the statement enclosed in reply to question No. 1, it would appear that a very small quantity of material is purchased on the continent. As all purchases from Europe are made by the Director General of Stores, London, I am unable to state the considerations which influence the placing of orders.

(6) *Corrugated sheeting.*—We only deal with British and Tata sheets. Materials and workmanship are both satisfactory.

Rolled Steel Sections.—We only deal with British and Tata steel. British steel is first class in quality and workmanship for the material being sent out is very good. Unfortunately steel-work is occasionally severely handled in shipment and this detracts from the quality. Tata steel is not so reliable as British though quite suitable for buildings and small work. The workmanship in India is, however, not up to the standard of British work. A good strong job is put up but lacks the fine finish of imported material.

Enclosure No. 1.

Purchase made in the Country.

Description.	1921-1922.		1922-1923.		1923-1924.		1924-1925.		1925-1926.	
	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.	Quantity.	Cost.
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
Rolled Sections . .	2,078	6,65,744	2,089	4,07,398	1,606	3,33,287	2,000	4,11,703	3,037	5,71,482
Wire	25	31,553	602	33,458	8	3,042	53	27,268	20	10,045
Nails	8	5,084	12	5,466	11	5,657	67	5,159	21	9,192
Tinned Sheets . .	No. 4,382	8,261	No. 8,186	8,898	No. 27,140	30,287	No. 16,130	14,159	No. 16,336	10,911
Fabricated Steel . .	*	76,833	*	5,28,201	*	10,81,456	*	4,14,962	*	6,73,742

* Weight is not available as orders have been placed for lump sum figures and not at unit rates.

W. C. BURN,
Offg. Controller of Stores.

EAST INDIAN RAILWAY,
OFFICE OF THE CONTROLLER OF STORES,
Calcutta, the 9th July 1926.

Enclosure No. 2.

Purchase made abroad.

Description.	Quantity.	F. O. B. Cost in Sterling.	Freight and Charges in Rupees.	Origin.
1921-1922.	Tons.	£	Rs.	
Rolled Sections . . .	1,770	29,763	46,178	British.
Wire	16	337	452	
Nails	3¼	97	283	
Tinned Sheets . . .	No. 10,000	599	628	
Fabricated Steel . . .	1,397½	52,587	84,845	
1922-1923.				
Rolled Sections . . .	2,667	27,108	86,921	British.
Wire	34	573	1,533	
Nails	11	259	886	
Tinned Sheets . . .	No. 2,520	142	230	
Fabricated Steel . . .	9,664	126,979	4,48,904	
1923-1924.				
Rolled Sections . . .	774	8,764	22,118	British.
Wire	1½	34	29	
Nails	7¼	176	728	
Tinned Sheets . . .	No. 14,900	688	572	
Fabricated Steel . . .	307¾	4,868	8,489	
1924-1925.				
Rolled Sections . . .	1,451¼	14,288	64,034	British.
Wire	8¾	169	795	
Nails	10½	197	843	
Tinned Sheets . . .	No. 15,800	745	1,949	
Fabricated Steel . . .	1,046¾	1,31,097	7,88,005	

Description.	Quantity.	F. O. B. Cost in Sterling.	Freight and Charges in Rupees.	Origin.
1925-1926.	Tons.	£	Rs.	
Rolled Sections . .	564	6,255	27,322	British Continental.
	320	2,108	15,359	
Wire	10	132	880	British.
Nails	7	132	605	
Tinned Sheets . . .	No. 17,200	623	2,179	
Fabricated Steel . .	1,133¾	19,243	65,888	
	48	432	Not yet shipped.	British Continental.
	500	3,300	Do.	

W. C. BURN,
Offg. Controller of Stores.

EAST INDIAN RAILWAY,
OFFICE OF THE CONTROLLER OF STORES,
Calcutta, the 9th July 1926.

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7. GREAT INDIAN PENINSULA RAILWAY.

(1) Letter, dated the 24th June 1926.

Herewith the answers of this Administration to the above questionnaire. It is, however, only an interim reply dealing with structural steel and iron work.

2. The compilation of information in regard to miscellaneous steel and iron materials is of some magnitude and answers for this class will follow.

3. We are electrifying a part of our line in the vicinity of Bombay for which a certain amount of steel material has been, and will be, used. I have referred the questionnaire, so far as it relates to our electrification, to our Consulting Electric Engineer's and will let you hear further.

NOTE.—This is an interim answer dealing with normal structural steel and ironwork. A further reply will follow in regard to miscellaneous steel material and steel material for electrification.

Answers to Questionnaire issued by the Tariff Board with their letter No. 217, dated the 8th May 1926.

Steel Materials (other than rails and fishplates).

1. Structural steel and ironwork.

Period.	Quantity Tons.	Cost, including freight.	Incidental Charges.	Duty.
		£	£	£
1921-22	2,393	84,923	450	...
1922-23	627	17,496	33	...
1923-24	357	6,347	131	623
1924-25	264	2,786	58	568
1925-26	1,472	22,459	174	2,473

All the above was purchased in Great Britain except 190 tons valued at £2,712 from Germany in 1925-26.

2. The amount of duty is shown in the statement. The imposition of duty has not affected our purchases as the material was for bridges and necessary practically regardless of price. Future purchases of steel will be affected only to a very small extent by maintenance of duties at present level, since it is not possible to substitute any other kind of construction except to a very small extent.

3. About 40,000 tons of steel work for bridges. A large quantity will be required in addition for electrification, of which no details are available at present. As tenders will be called for simultaneously in England and India in future, it is not possible to say whether steelwork will be imported as rolled steel or fabricated steel. So far we have had no experience of heavy bridge work manufactured in India and do not know whether Indian firms can compete with English and Continental firms.

4. No contracts have been entered into for the supply of structural steel and ironwork material from 1926-27 onwards.

5. 190 tons of steelwork was purchased in Germany during 1925-26. The order was placed by the High Commissioner for India, presumably because the rate was more favourable than those tendered by English firms.

6. In regard to rolled sections the English are best; Indian rank second and Continental come third. Some of the Continental material is, of course, inferior, but the best is up to British Standard Specification. The workmanship in the 190 tons of steelwork referred to in questions 1 and 5 from Germany was sound but the finish was not so good as English. As regards structural steel manufactured in India, of which we have purchased only for small sheds, etc., the workmanship of some is nearly up to English standard, but some of the work was very poor.

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(2) *Letter from the Great Indian Peninsula Railway, dated the 16th August 1926.*

In continuation of the office letter No. 11474-K.-215, dated 25th June 1926, I send herewith six copies of the answers of this Administration in regard to miscellaneous steel and iron materials including electrification material.

NOTE.—These answers are in regard to miscellaneous steel material and steel material for electrification. This completes the *interim* reply sent with our letter No. 11474-K.-215, dated 25th June 1926.

Answer No. 1.—Three statements, giving the information required in respect of (1) miscellaneous steel material imported by the railway, (2) miscellaneous steel material purchased in India, and (3) steel material for electrification imported, during the years 1921-22 to 1925-26, are enclosed.

Answer No. 2.—The imposition of the duties has not been noticed as affecting the prices of miscellaneous steel materials, which have been on the downward tendency for some time, but are not yet down to the pre-war level for which perhaps duties are partly responsible. As regards future purchases it is not anticipated that they will be affected even though there may be an increase on present levels.

Answer No. 3.—The probable *annual* consumption of the undermentioned class of steel and wrought iron materials are:—

Rolled steel beams	20 tons.
Rolled steel angles	260 ,,
Rolled steel channels	25 ,,
Rolled steel plates	417 ,,
Rolled steel bars and rods	1,515 ,,
Rolled steel sheets, black	226 ,,
Rolled steel sheets, galvanized	128 ,,
Wire, steel and iron, black and galvanized	113 ,,
Wire nails	17 ,,
Tin plates	3,550 Nos.

Answer No. 4.—A statement showing details of contracts so far entered into or being entered into for compliance during 1926-27 is attached. Contracts for future years have not yet been entered into.

Answer No. 5.—From the statement enclosed referring to paragraph 4 dealing with forward contracts it will be seen that some contracts have already been let to Continental firms, and I can only assume that all things being considered, it was a question of price that influenced the authorities at Home in letting the contracts on the Continent. Dealing with what *Local* purchases may be necessary in the future we have no option but to purchase Continental metal owing to the almost entire absence of British material in the Local Market. Firms guarantee the Continental make as being up to British Standard Specification.

Answer No. 6.—Generally we have not experienced any trouble with the quality of the material manufactured in Great Britain or the Continent.

Enclosure No. 1.

Statement showing the quantities and prices, etc., of such of the various classes of steel and wrought iron materials other than rails and fishplates—as which protective duties are at present imposed—which were purchased by the C. I. P. Railway in Great Britain and on the Continent during each of the five years from 1891-92 to 1895-96.

Item	1891-92.						1892-93.						1893-94.						1894-95.						1895-96.					
	Quantity Number	Price f.o.b. British or Continental Port.	Freight charges.	Landing charges	Customs charges.	Bounties Port Trust charges	Country of origin.	Quantity Number.	Price f.o.b. British or Continental Port.	Freight charges	Landing charges	Customs charges.	Bounties Port Trust charges	Country of origin.	Quantity Number	Price f.o.b. British or Continental Port.	Freight charges	Landing charges	Customs charges.	Bounties Port Trust charges	Country of origin.	Quantity in Numbers.	Price f.o.b. British or Continental Port.	Freight charges.	Landing charges	Customs charges	Bounties Port Trust charges	Country of origin.
	Tons.	£	£	Rs.	Rs.	Rs.		Tons.	£	£	Rs.	Rs.	Rs.		Tons.	£	£	Rs.	Rs.	Rs.		Tons.	£	£	Rs.	Rs.	Rs.	
Rolled steel beams	5	66	5	34		8		15	139	14	101		15		10	80	11	66		11		23	204	24	151	676	26		8	72	6	53	242	9	
" " angles	49	713	67	331		94		146	1,273	139	760		164		257	2,208	265	1,501		282		281	2,389	301	1,654		2,884	102	102	873	100	606		2,060	122	
" " channels	12	200	21	132		20		64	640	67	396		94		90	917	97	558		97		4	34	5	20		120	4	4	34	5	20		120	4	
" " plates	178	2,221	213	1,245		195		854	7,439	898	5,215		1,016		149	1,270	208	1,484		1,720		324	2,695	286	1,884		6,720	224	18	149	18	130		434	12	
" bars and rods	457	5,656	656	3,285		498		1,396	11,148	1,620	8,403		1,515		1,350	10,845	1,640	10,305		1,530		654	7,019	780	4,707		16,329	748	361	3,456	378	2,591		14,440	406	
" sheets, black	140	2,253	270	945		158		127	1,206	135	657		142		42	7,140	98	270		98		54	1,527	96	531		2,700	94	102	1,092	121	1,012		7,795	161	
" sheets, galvanized	102	2,982	142	720		122		72	1,462	101	508		92		102	2,304	161	1,050		152		86	959	54	370		1,620	60	33	757	47	259		1,178	31	
Wire, steel and iron, black and galvanized	64	2,134	224	432		72		126	3,555	196	1,029		126	Germany.	95	469	45	220		11		52	786	58	254		1,620	31	33	451	36	146		1,620	54	
Wire rails	4	92	8	52		8	Belgium.	4	142	7	41		7	Belgium.	7	147	19	1		7		47	780	52	312		1,620	52	Germany.							
															1	165	1	319																		
															17	324	19												Belgium, Germany.							
	Nos.							Nos.																						Nos.						
Tin-plates	4,000	300	15	24		9	Great Britain.	67,000	940	93	536		67		9	126	11	72		9	Great Britain.									1,300	98	6	41		55	8	

Note.—The Customs charges for 1st July 1895 (Rs. 1,620.52) and 1896-96 were not paid being considered as Departmental Stores.

Enclosure No. 2.

Statement showing the quantities and prices, etc., of the various classes of steel and wrought iron materials other than rails and fishplates on which protective duties are at present imposed—purchased in India during each of the 5 years 1921-22 to 1925-26.

Item.	1921-22.			1922-23.			1923-24.			1924-25.			1925-26.		
	Quantity or Number.	Price.	Country of origin.	Quantity or number.	Price.	Country of origin.	Quantity or number.	Price.	Country of origin.	Quantity or number.	Price.	Country of origin.	Quantity or number.	Price.	Country of origin.
	Tons.	Rs.		Tons.	Rs.		Tons.	Rs.		Tons.	Rs.		Tons.	Rs.	
Rolled steel beams	½	24	Not India.	16	3,018	Not India.	22	3,613	Not India.	7	1,091	Not India.	27	3,672	Not India.
,, ,, angles	108	29,451		116	22,443		46	9,271		12	2,034		408	58,977	
	84	7,755													
,, ,, channels	1	237		...	...	...	½	40		...	...		206	30,529	
,, ,, plates	180	53,088	Not India.	297	48,606	Not India.	120	32,392		13	2,035		526	73,291	
,, ,, bars and rods	719	2,53,648		759	1,84,087		280	52,538		106	16,053		1,230	1,82,130	
	155	33,749	India.	14	2,414	India.	2	288	India.						Not India.
,, ,, sheets, black	61	19,190		9	2,028		1	179	Not India.	17	2,840	Not India.	107	17,602	
,, ,, sheets, galvanized	½	120	Not India.	26	8,920	Not India.	5	989		1	288		36	11,707	
Wire, steel and iron	2	1,052		½	301		...	...	...	½	44		2	618	
Wire nails	13	4,153		12	3,770		3	996	Not India.	...	...	...	5	1,055	
Tin plates	...	...	...	....	...	...	...	...	...	...	...	...	No. 2,275	*2,081	

Statement showing the quantities and prices of structural material for electrification received from Home up to 30th June 1926.

1923-24.		1924-25.		1925-26.		1926-27.	
Quantity.	Price f.o.b. British Port.	Quantity.	Price f.o.b. British Port.	Quantity.	Price f.o.b. British Port.	Quantity.	Price f.o.b. British Port.
Tons	£	Tons	£	Tons	£	Tons	£
247	6,752	1,132	32,526	322	9,579	7	310

NOTE.—All materials imported from Great Britain.

Enclosure No. 4.

Statement showing the quantities, prices, etc., of the various classes of steel and wrought iron materials other than rails and fishplates on which protective duties are at present imposed—for which contracts have been let in Great Britain and the Continent for compliance during 1926-27, and also the quantities due on outstanding Home indents for 1926-27—for which no contracts have been let.

Item.	Quantity or number.	Price (f.o.b. British or Continental Port) fixed under the contract or estimated price shown in indent in cases where contracts have not been let.	Country of origin.	India Office Contract.		Date when contract should be completed.	Contractor's name and address.
				No.	Date.		
	Tons.	£					
Rolled steel beams .	19	142	No contract has	yet been let			
Rolled steel angles .	52	355	Great Britain .	E. 4644-6508	11th November 1925.	1st July 1926	United Strip & Bar Mills. The Ickles, Sheffield.
	26	247	Do. .	F. 176-9284	17th April 1926.	November 1926.	The Metropolitan Carriage, Wagon & Finance Co., Ltd., Saltby, Birmingham.
	92	727	Do. .	F. 180-10864	Do. .	October 1926	The Steel Co. of Scotland, Ltd., 9, Mincing Lane, E. C. 3.
	254	2,000	No contract has	yet been let.			
Rolled steel channels .	15	131	No contract has	yet been let.			

Item.	Quantity or number.	Price (f.o.b. British or Continental Port) fixed under the contract or estimated price shown in indent in cases where contracts have not been let.	Country of origin.	India Office Contract.		Date when contract should be completed.	Contractor's name and address.
				No.	Date.		
Rolled steel plates .	Tons. 176	£ 1,153	Germany .	E. 4488-6512	2nd November 1925.	July 1926 .	Hensechel & John G. M. B. H. Bochum Per F. Suren, 5a, Wardrope Place, Carter Lane, E. C. 4.
	512	3,328	No contract has yet been let.				
Rolled steel bars and rods.	67	879	Great Britain .	E. 4173-6727	13th October 1925.	1st June 1926	S. Fox & C., Ltd., Stocks Bridge Works, Near Sheffield.
	17	181	Do. .	E. 4313-6303	21st October 1925.	Do.	P. & W. MacLellan, Ltd., 129, Irongate, Glasgow.
	19	177	Do. .	E. 4368-6514	24th October 1925.	15th April 1926.	The Earl of Dadley's Round Oak Works, Ltd., Brierley Hill, Staffordshire.
	20	294	Do. .	E. 4453-6510	29th October 1925.	15th July 1926.	The Exors. of James Mills, Ltd., Bredbury Steel, Near Stockport.
	404	3,114	Do. .	E. 4644-6508	11th November 1925.	1st July 1926	United Strip & Bar Mills, Ltd., The Ickles, Sheffield.
	½	9	Do. .	E. 5686-6510	20th Jan. 1926.	April 1926 .	The Exors. of James Mills, Ltd., Bredbury Steel . Works, Near Stockport.

	6	80	Great Britain .	F. 176-9284	17th April 1926.	November 1926.	The Metropolitan Carriage, Wagon and Finance Co., Ltd., Saltby, Birmingham.
	16	138	Do. .	F. 180-10846	Do.	October 1926.	The Steel Co. of Scotland, Ltd., 9, Mincing Lane, E. C. 3.
	1,729	15,723	No contract has yet been let.				
Rolled steel sheets, black	41	413	Great Britain .	E. 4311-6517	21st October 1926.	15th July 1926.	The Steel Co. of Scotland Ltd., 9, Mincing Lane, E. C. 3.
	175	2,331	Do. .	E. 6666-10666	25th March 1926.	30th September 1926.	The Ebbev Vale, Steel, Iron and Coal Co., Ltd., 1, Victoria Street, Westminster, S. W. 1.
	57	1,690	Do. .	F. 176-9284	17th April 1926.	November 1926.	The Metropolitan Carriage, Wagon and Finance Co.,Ltd., Saltby, Birmingham.
	633	9,478	No contract has yet been let.				
Rolled steel sheets, galvanized.	20	327	Belgium	E. 4628-6381	10th November 1925.	15th July 1926.	Mr. J. O'Hara Murray, 66, Hatton Gardens, London, E. C 1.
	142	2,636	No contract has yet been let.				
Wire steel and iron black and galvanized.	135	2,603	No contract has yet been let.				
Wire nails . . .	21	289	No contract has yet been let.				
	No.						
Tin plates . . .	4,816	186	No contract has yet been let.				

8. MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

(1) *Letter, dated the 16th July 1926.*

The following table gives purchases in India and abroad of the various classes of material for the years 1921-22 to 1925-26 for local purchase and for the year 1925-26 only for imported material. These later figures are for one year only as it has been necessary to obtain them from the Customs accounts and the investigation is slow and laborious. The tonnage figures for local purchases are not available; they include items purchased by number and not by weight:—

Years.	Items.	Local purchases.		Imported.	
		Tonnage.	Value.	Tonnage.	Value in sterling.
			Rs.		£
1921-22	Fabricated steel	...	2,80,310	...	...
	Wire and wire nails	...	...	...	...
	Tin plates	...	...	...	...
	Rolled steel	...	50,846	...	
1922-23	Fabricated steel	...	90,877	...	...
	Wire and wire nails	...	1,830	...	...
	Tin plates	...	3,140	...	...
	Rolled steel	...	89,320	...	...
1923-24	Fabricated steel	...	1,08,155	...	...
	Wire and wire nails	...	455	...	...
	Tin plates	...	..	...	...
	Rolled steel	...	62,312	...	...
1924-25	Fabricated steel	...	1,22,669	...	...
	Wire and wire nails	...	14,465	...	...
	Tin plates	...	...	...	...
	Rolled steel	...	30,595	...	...
1925-26	Fabricated steel	...	3,08,491	6,480	189,634
	Wire and wire nails	...	435	83	1,953
	Tin plates	...	3,000	...	...
	Rolled steel	...	2,60,035	1,019	9,571

The prices given for imported material include insurance and freight.

We have no information to enable us to distinguish the country of origin. It is understood that the bulk of the imported material is of British manufacture. Part of the quantity purchased locally is of Continental manufacture.

2. The effect of the customs duty is to increase our annual expenditure by abouf Rs. 3,75,000. The bulk of the items are necessities for which there is no substitute, and in these cases duties will not affect purchase. In the case of items intended for additions or improvements which have to be justified financially, the high prices may cause the proposed improvement to be abandoned.

3. Our consumption for the next four years will be over 1925-26 figures by 10 or 20 per cent.; after that it will probably fall below the 1925-26 figures.

4. We have entered into no forward contract.

5. A certain amount of the material purchased locally was Continental. The reason for purchasing was that the quality was sufficiently good for the purpose for which it was required and the price was the lowest offered.

6. As regards material, British steel is usually the best, Tata's not quite so good, and the Continental doubtful. As regards workmanship, on fabricated articles we get a larger proportion of unsatisfactory cases where the manufacture is carried out in India.

(2) *Letter from the Madras and Southern Mahratta Railway Company, Limited, dated the 23rd July 1926.*

My letter No. M.-730 of 15/16 July 1926 regarding steel materials other than rails and fishplates.

Further to my letter quoted above, I have the honour to enclose a statement of steel materials imported for the use of this Railway Administration during the year 1924-25.

Enclosure.

THE MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

(Incorporated in England.)

PROTECTION TO STEEL INDUSTRY.

Materials received into Stores, during the year 1924-25.

ABSTRACT.

Description.	No.	Quantity.	Cost price including insurance and freight.	REMARKS.
		T. Cwt. Q. lb.	£ s. d.	
Fabricated steel	B. G.	3,428 13 2 0	97,619 3 6	
	M. G.	2,474 19 2 27	73,730 11 0	
	TOTAL	5,723 13 0 27	171,349 14 6	
Rolled steel	B. G.	285 13 2 10	8,396 14 1	
	M. G.	228 11 2 8	8,022 1 10	
	TOTAL	514 5 0 18	6,418 15 11	
Wire and Wire Nails	B. G.	20 0 2 4	587 6 0	
	M. G.	7 12 0 0	210 18 5	
	TOTAL	27 12 2 4	798 4 5	
Tin sheets and Plates	...	*nil*	*nil*	

(3) *Letter from the Madras and Southern Mahratta Railway Company, Limited, No. N.-730, dated the 29th July 1926.*

Further to my letter No. N.-730 of 23rd July 1926, I have the honour to forward herewith a statement of steel materials imported for the use of this Railway Administration during the year 1923-24.

PROTECTION TO STEEL INDUSTRY.

Materials received into stores during the year 1923-24.

ABSTRACT.

Description.	Quantity.				Cost price including freight and Insurance.		
	T.	C.	Q.	lbs.	£	s.	d.
Fabricated Steel—							
B. G.	2,826	14	2	13	91,103	12	3
M. G.	1,512	9	1	4	45,474	3	2
TOTAL .	4,339	3	3	17	136,577	15	5
Rolled Steel—							
B. G.	929	12	0	12	10,917	17	3
M. G.	563	2	2	24	7,480	8	9
TOTAL .	1,497	14	3	8	18,398	6	0
Wire and Wire Nails—							
B. G.	16	10	1	0	482	5	4
M. G.	6	8	1	2	190	17	9
TOTAL .	22	18	2	2	673	3	1
Tin plates—							
B. G.	9	11	3	10	393	13	3
M. G.	2	9	1	21	97	7	8
TOTAL .	12	1	1	3	491	0	11

Letter, dated the 5th August 1926, from the Madras and Southern Mahratta Railway Company, Limited.

Further to my letter No. M.-730 of 29th July 1926, I have the honour to forward herewith a statement of steel materials imported for the use of this Railway Administration during the year 1922-23.

THE MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

(Incorporated in England.)

PROTECTION TO STEEL INDUSTRY.

Materials received in Stores during the year 1922-23.

ABSTRACT.

Description.	Quantity.				Cost price including Insurance and freight.		
	T.	C.	Q.	lbs.	£	s.	d.
Fabricated steel—							
B. G.	6,474	16	2	20	178,009	18	6
M. G.	2,542	9	2	27	138,712	7	7
TOTAL .	9,017	6	1	19	316,722	6	1
Rolled steel—							
B. G.	974	10	1	6	12,778	13	10
M. G.	695	14	2	20	9,294	4	6
TOTAL .	1,670	4	3	26	22,072	18	4
Wire and Wire nails—							
B. G.	24	17	2	6	652	7	11
M. G.	13	8	2	20	377	4	10
TOTAL .	38	6	0	26	1,029	12	9
Tin plates—	*Nil.*						

9. NORTH WESTERN RAILWAY.

Letter, dated the 4th August 1926.

In continuation of my letter No. 197-8-216, dated 22nd/28th July 1926, I beg to forward, herewith, a copy of answers to the questionnaire relating to the purchase of steel and wrought iron materials other than rails and fish-plates.

Answer 1.—Please refer to the enclosed lists marked A, B and note referred to in list A.

Answer 2.—The Capital and Revenue Expenditure of this Railway has been increased by the amount of the duty which has been paid on the various classes of materials under discussion that have been imported. Details of the quantities of such materials imported are shown in the statement supplied in answer to question 1 above. The imposition of the duties has not affected the quantity of the various materials purchased. Purchases are only made to meet requirements irrespective of the duty.

Answer 3.—Please refer to the enclosed list marked C.

Answer 4.—An indent for our requirements of steel mild sections was placed on the Chief Controller of Stores, Indian Stores Department, Simla, who has, after inviting simultaneous tenders in India and England, placed a contract for about half the quantities with Messrs. Tata Iron and Steel Company, Jamshedpur, and for the balance with the India Office, London.

The quantities included in the Indent represent 12 months' requirements from 1st June 1926 to 31st May 1927.

A list detailing the quantities for which Indent was placed on the Chief Controller of Stores together with those indented for from Home against 1926-27 is also enclosed marked "D." The prices quoted by Tata are noted in the List. The rates quoted in England have not yet been communicated. A statement marked "E" showing full particulars of contracts entered into with firms in India for the supply of the fabricated steel for 1926-27 is enclosed. No indent for fabricated steel has been sent Home, for 1926-27.

Answer 5.—Purchases of these materials on the Continent are not arranged direct though such orders may be placed by Director General, India Store Department, London, for the supply of material included in one of our English Indents.

Answer 6.—The quality of the material manufactured in Great Britain has invariably been of a high standard and that manufactured in India has generally been suitable for our requirements.

The chief difficulty with regard to such material manufactured on the Continent has been that it is frequently not made to comply with British Standard Specification.

LIST A.

Steel and wrought iron materials other than rails and fishplates imported from Home through the India Office, during the years

Particulars.	1921-22.				1922-23.				1923-24.				1924-25.				1925-26.			
	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.
	Tons.	£ s. d.							Tons	£ s. d.			Tons	£ s. d.			Tons	£ s. d.		
Fabricated steel	3,365	16 4 0 to 16 10 0	Tons	Britain.	...	...	...	...	450	16 8 6	Tons	Britain.	224	13 6 0	Tons	Continent (Antwerp).	2,550	15 10 0	Tons	Britain.
									29	16 17 6	,,						Pieces			
	545	25 0 0	,,						109	5 4 6	Each	Do.					73	12 14 0	,,	Do.
									Nos. 408								Nos.			
									Tons								53	15 3 6	,,	Do.
									72	17 5 0	Ton									
Steel channels	60	9 7 6	,,	Do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Steel flats	50	9 7 6	,,		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
					Yards.	£ s. d.			Yards.				Yards.				Yards.			
Points rodding	...	...	...	...	20,000	0 1 5½	Yd.	Britain.	10,000	0 1 4	Yd.	Britain.	20,000	0 1 4½	Yd.	Britain.	30,000	0 1 0	Yd.	Britain.
													50,000	0 1 2½						
	Cwts.				Cwts.				Cwts.				Cwts.				Cwts.			
Sheets, iron, galvd. corrugated.	290	17 5 0	...	Britain	1,405	0 18 3	Cwt.	Do.	410	1 2 0	Cwt.	Do.	1,800	1 1 6½	Cwt.	Do.	2,500	0 18 3	Cwt.	Do.
	1,938	19 17 6	...		302	22 7 6	Ton		500	1 1 9	,,		2,370	22 5 0	Ton		2,376			
	850	18 5 0	...		800	1 1 6	Cwt.		2,376	24 5 0	Ton.		1,188	0 15 2½	Cwt.					
	335	1 1 6	Cwt.														Nos.			
	664	20 10 0	Ton														3,600	0 13 7	Each	Do.
Wind-Ties, Galvd.	...	...	...	...	100	16 0 6	Ton	Do.	70	0 19 0	Cwt.	Do.					Cwts.			
									40	0 18 10			140	0 19 0	,,	Do.	200	0 16 10½	Cwt.	Do.
Wire Steel, solid, drawn 10 S. W. G., single strand for signals.	...	...	...	...	600	0 1 4	Cwt.	Do.	...	...	...	...	150	1 5 9	,,	Do.	300	1 4 0	,,	Do.
					600	1 10 0	,,										400	1 3 6	,,	Do.

LIST A—*contd.*

Particulars.	1921-22.				1922-23.				1923-24.				1924-25.				1925-26.			
	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.
Nails Iron wire, French.	...	...	...	...	Cwts. 672	£ s. d. 0 16 9 to 2 5 3	Cwt.	Britain	Cwts. 88	£ s. d. 0 16 5 to 0 17 0	Cwt.	Britain	Cwts. 60	£ s. d. 0 16 0	Cwt.	Britain.				
	Tons	£ s. d.											855	0 12 6 to 1 14 9	...	Continent Antwerp.				
Beams, rolled steel.	150	9 7 6	Ton	Britain	914	0 8 0	,,	Do.	1,570	0 9 0	,,	Do.	692	0 8 0	Cwt.	Britain.				
	Cwts.																			
	716	0 8 6	Cwt.		545	0 7 10½			170	0 9 6										
Iron, bar, fire	...	...	...	...	...	...	...	...	Tons 150	0 10 4½	,,	Do.	Tons 300	0 10 5	,,	Continent Antwerp.	Cwts. 4,000	£ s. d. 0 6 0	Cwt.	Britain.
									75	0 11 1½										
Iron, flat and square of best quality for stamping.	...	...	...	...	...	...	...	...	Cwts. 340	0 13 7	,,	Do.	...	...	...	...	30	0 12 10	,,	Do.
Iron Lowmoor	25	2 9 6	Cwt.	Britain	142	1 13 7 to 1 17 8	Cwt.	Britain	62	1 9 0	,,	Do.	145	1 8 4½	Cwt.	Britain	130	1 8 6	,,	Do.
	6	2 11 6			8	1 16 6 to 2 1 7														
Iron Plate, Cheq-uered.	98	1 1 0	,,	Do.	30	0 10 6	,,	Do.	30	0 11 0	,,	Do.	50	0 12 0	,,	Do.	72	0 9 9	,,	Do.
Iron sheet, galvd. plain.	170	1 0 1	,,	Do.	430	1 0 11	,,	Do.	327	1 3 5	,,	Do.	590	1 2 0	,,	Do.	400	1 0 5	,,	Do.
Steel Ferrule	120	1 8 6	,,	Do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Steel, mild, angles	...	...	...	...	...	...	...	...	427	0 10 0	Cwt.	Britain	Tons 3,283	7 2 6	Ton	Continent	260	0 7 10½	Cwt.	Britain
Steel, mild bar, special for horn chocks.	...	...	...	...	50	0 12 6	Cwt.	Britain	124	12 15 0	,,	Do.	...	...	...	...	...	...	...	...
Steel, mild channels	...	...	...	...	...	...	...	...	Cwts. 230	0 9 0	,,	Do.	Tons 873	0 10 9	Cwts.	Britain	...	...	...	...
													200	0 8 4	,,	Do.	...	...	...	...
... ...	...	...	...	...	Cwts. 290	0 9 1	Cwt.	...	Cwts. 15	0 10 4½	,,	Do.	...	...	...	...	...	...	...	...
									283	0 13 0										
	Cwts.	£ s. d.			Tons				Tons											
Steel, mild, flat	203	0 11 0	Cwts.	Britain	61	0 9 8	,,	Do.	1,471	11 5 0	Ton	...	5,270	11 0 0	Ton	Britain	...	...	...	...

LIST A—*contd.*

Particulars.	1921-22.				1922-23.				1923-24.				1924-25.				1925-26.			
	Quantity imported.	f. o. b. price.	Unit	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.
	Cwts.	£ s. d.			Cwts.	£ s. d.			Cwts.	£ s. d.			Cwts.	£ s. d.			Cwts.	£ s. d.		
Steel, mild, half round.	...	...	...	...	10	0 10 6	Cwt.	Britain	12	0 11 0 to 0 12 6	Cwt.	Britain	...	...	...	...	3	0 11 0	Cwt.	Britain.
Steel, mild, half round, hexagon bars, black, for W. W. Standard nuts.	...	...	...	...	405 2,394	0 11 9 0 9 10	,,	Do.	80	0 18 0	,,	Do.	700	0 10 6	Cwt.	Britain	...	...	...	...
Steel, mild, bright, for W. W. Standard nuts.	...	...	...	...	...	...	...	...	...	...	...	...	98	0 17 0	,,	Do.	...	...	...	...
Steel, hoop	...	...	...	...	50 15	0 11 0 0 8 6	Cwt.	Britain	23 10	0 13 9 0 12 3	Cwt.	Britain	110	0 11 6	,,	Do.	Cwts. 140	£ s. d. 0 10 4½	Cwt.	Britain.
Steel, round	...	...	...	...	Tons 387 Cwts. 85	9 19 6 0 8 6	Ton Cwt.	Do. Do.	593	0 9 3 to 0 9 9	,,	Do.	351	0 8 10½	,,	Do.	...	...	...	...
...	...	...	...	...	...	...	...	...	750	11 9 0	Ton.	Do.	...	...	...	...	...	...	...	...
Steel, square	...	...	...	...	1,500	0 8 4½	Cwt.	Britain	1,100	0 9 3 to 0 9 0	Cwt.	Do.	...	...	...	...	...	...	...	...
Steel, mild plates	Cwts. 5,809 1,319 3,608	£ s. d. 0 9 0 0 10 0 0 16 6	Cwt.	Britain	10,132	0 0 9	,,	Continent Antwerp	2,308 3,632	0 9 0 0 10 0	,,	Do.	...	...	...	...	...	...	...	...
Steel, sheets	308 2,506	0 13 0 0 18 9 to 0 19 0	,,	Do.	4,415½	0 10 7	,,	Britain	1,849 1,065	0 13 0 0 13 3	,,	Do.	...	...	...	...	...	...	...	...
Steel, tees	...	...	...	...	...	...	...	...	230 120	0 10 9 0 11 3	,,	Do.	Cwts. 600	£ s. d. 0 9 3	Cwt.	Britain	...	...	...	...
Steel, wire, half round.	213	0 19 10	Cwt.	Britain.	35	1 0 9	Cwt.	Britain	86 46	1 1 0 0 18 6 to 1 10 0	,,	Do.	97	0 18 0	,,	Do.	152	0 13 6 to 1 2 6	Cwt.	Continent Antwerp.

List A—*contd.*

Particulars.	1921-22.				1922-23.				1923-24.				1924-25.				1925-26.			
	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.	Quantity imported.	f. o. b. price.	Unit.	Country of origin.
	Cwts.	£ s. d.			Cwts.	£ s. d.			Cwts.	£ s. d.			Cwts.	£ s. d.			Cwts.	£ s. d.		
Steel, wire, half round.	75	1 2 2	Cwt.	Britain.	45	0 17 6	Cwt.	Britain.	57	0 18 3	Cwt.	Britain.	115	0 12 9	Cwt.	Britain	127	0 10 3 to 0 16 9	Cwt.	Continent Antwerp.
									30	0 14 6 to 1 1 6										
Steel, wire, round ¾" for passenger communication.	...	...	...	...	10	6 15 0	,,	Do.	...	...	...	Do.	...	...	...	...	...	...	...	...
Steel, wire, galvd. No.	...		...	...	700	0 15 4½	,,	Do.	450	0 16 3 to 0 17 3	Cwt.	Do.	600	0 15 3	Cwt.	Britain	500	0 10 3	Cwt.	Continent Antwerp.
Steel, round, special for making lap.	28	5 15 0	Cwt.	Britain	12	5 12 0	,,	Do.	2	6 0 0	,,	Do.	1	5 12 0	,,	Do.	...	...	...	...
Steel, spring, flat .	256	1 3 0 to 5 5 0	,,	Do.	60	0 18 10 to 1 14 0	,,	Do.	2	1 17 6 to 9 0 0	,,	Do.	2	9 0 0	,,	Do.	½	8 15 0	Cwt.	Britain.
					1	10 0 0			480	0 16 7½										
					430	0 14 6			430	0 16 0										
Steel, spring, round	65	2 1 0	,,	Do.	14	2 9 0 to 4 18 0		Do	Lbs. 10 Cwts. 16	2 1 0 cost 1 13 6 to 3 5 0										
					lbs. 14	5 7 4			9	1 15 0 to 2 10 0	Cwt.	Do.	3	2 4 0	,,	Do.	...	...	...	...
	Nos.								Nos.				Nos.							
Tin plates .	1,000	0 1 4½	Each	Do.	...	...	...	,,	948	0 0 11	Each		3650	0 0 4 to 0 1 4	Each	Do.	Nos. 3,500	0 1 2½	Each	Britain.
	Cwts.								474	0 0 5 to 0 1 3	,,	Do.								
Wire, stitching, iron tinned.	13	2 14 3	Cwt.	Do.	...	...	...	...	Cwts. 8	2 2 0 to 2 3 6	Cwt.	Do.	...	...	...	...	Cwts. 2	1 18 6	Cwt.	Do.
Wire, iron, bars, galvd. telegraph.	...	...	...	...	205 126 690	0 18 4½ 0 18 7	Cwt.	Continent Antwerp. Hamburg. Britain.	...	...	...	...	Cwt. 300	1 1 0	Cwt.	Britain	...	...	...	...
Wire, steel, tinned for banding.	4	4 9 6	Cwt.	Britain	4	6 0 0	,,	Do.	...	...	...	...	...	...	...	...	...	...	...	...

Note.—Regarding freight charges please see office note attached.

Note on freight and other charges.

The following charges are to be added to the f. o. b. rates shown in the statement attached, to cover charges for freight, landing, etc. :—

	£	s.	d.		
1. Sea freight . .	1	2	0	per ton.	These are the current charges and are subject to alteration according to the revision made by the India Office and I. S. Department from time to time. On supplies received from Home through the Agency of the India Office, 3 per cent. departmental charges are paid to the Director-General in lieu of the charges marked 2, 3 and 4.
2. Interest . . .	0	18	4	,, £100	
3. Insurance . .	0	4	0	,, £100	
4. Freight brokerage .	0	0	6	,, ton.	
	Rs.	A.	P.		
5. Wharfage charges .	2	2	0	per ton.	
6. Handling charges .	0	10	0	,,	
7. *Custom duty* . .	*15 per cent.* ad valorem (*according to Tariff Schedule*).				

LIST B.

Steel and wrought iron materials other than rails and fishplates purchased in India.

Item No.	Description of stores.	Purchase made during 1921-22.			Purchase made during 1922-23.			Purchase made during 1923-24.			Purchase made during 1924-25.			Purchase made during 1925-26.		
		Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.
	Fabricated steel	5,908	25 11 0	India	2,200	26 13 6	India	28,220	17 8 6	India	749	24 12 0	India	6,030	17 3 6	India.
1	Iron or steel mild angle	478	10 0 0 to 29 8 0	Britain	9,582	8 4 0 to 16 0 0	Not known	1,240	8 5 0 to 10 12 0	Britain	466	7 8 0 to 10 15 0	Britain	478	7 10 0 to 9 4 0	Britain.
		639		Do.												
		339	11 12 0 to 20 0 0	America	...	...	...	6,888	7 11 0 to 16 5 0	Not known	32,664	7 4 0 to 13 9 0	Not known	33,151	6 14 0 to 11 0 0	Not known.
		143	15 8 0	Continent	...	...	...	...	...	...	...	...	...	...	...	...
		3,740	9 6 0 to 23 8 0	Not known	...	...	...	...	...	...	...	...	...	...	...	...
2	Beams	8,974	9 0 0 to 15 3 0	India	...	...	...	2,705	7 11 0 to 8 8 0	India	6,705	7 11 0 to 8 9 0	India	8,383	7 6 0 to 7 9 0	India.
		3,070	9 9 0 to 22 2 0	Not known	2,932	7 12 0 to 8 11 0	India	3,839	7 4 0 to 9 7 0	Not known	10,669	7 9 0 to 14 8 0	Not known	14,682	6 8 0 to 8 11 0	Not known.
		663	14 8 0 to 15 0 0	Britain	12,843	7 10 0 to 14 8 0	Not known	157	7 7 0	Continent	43	11 8 0	Britain	19,074	9 4 0 to 9 8 0	Britain.
								3	9 0 0	Britain	...	...	...	395	7 7 0	Continent.
3	Billets	893	10 0 0 to 12 11 0	Not known	340	7 4 0 to 8 8 0	...	880	7 5 0 to 8 1 0	Not known	2,269	7 6 6 to 7 11 3	Not known	1,972	7 8 0	Not known.
4	S. M. Blooms	309	12 13 3	...	...	...	...	2,289	7 4 0 to 8 0 0	...	490	7 12 0	...	...	...	...
5	Iron or S. M. Channel	1,130	15 8 0 to 24 14 0	Britain	3,228	7 9 9 to 13 14 0	...	202	9 8 0 to 10 0 0	India	3,363	7 11 0 to 11 15 0	...	5,847	7 11 0 to 13 0 0	...
		38	20 8 0	America	...	...	...	607	7 10 6 to 24 0 0	Not known	...	...	...	...	...	...
		228	9 8 6 to 28 0 0	Not known	...	...	...	...	...	...	...	...	...	...	...	...

List B—*contd.*

Item No.	Description of stores.	Purchase made during 1921-22.			Purchase made during 1922-23.			Purchase made during 1923-24.			Purchase made during 1924-25.			Purchase made during 1925-26.		
		Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.
5	Steel mild flat	851	8 15 0 to 23 0 0	Britain	766	8 4 0	Britain	158	7 15 0 to 10 7 0	Britain	18,113	7 0 0 to 18 4 0	...	337	7 4 0 to 7 12 0	Britain.
		675	9 4 0 to 17 4 0	America	14,450	7 6 0 to 19 0 0	Not known	16	7 12 0	Continent	...	...	...	23,434	7 2 0 to 15 7 0	Not known
		134	8 8 0 to 23 0 0	Continent	...	...	...	9,894	7 0 0 to 16 15 6	Not known	...	...	...	...	...	...
		462	8 4 0 to 29 0 0	Not known	...	...	...	...	...	...	...	...	...	...	...	...
6-A	Iron common flat	...	...	...	1,102	12 0 0 to 12 8 0	...	590	13 8 0	...	...	...	...	...	...	...
7	Iron or steel mild bars hex.	700	15 2 0 to 15 8 0	India	150	13 12 0 to 15 2 0	India	186	13 12 0 to 15 2 0	India	219	13 12 0 to 15 12 0	India	143	13 12 0 to 15 8 0	India.
		360	14 8 0 to 17 8 0	Britain	176	14 8 0 to 17 8 0	Britain	209	14 8 0 to 16 4 0	Britain	295	14 8 0 to 15 12 0	Britain	215	15 8 0 to 18 4 0	Britain.
											...	...	...	133	10 15 0	Not known.
8	Iron or S. M. Hoop	135	9 4 0 to 11 14 0	India	325	9 4 0 to 11 14 0	India	190	9 4 0 to 11 14 0	India	175	9 4 0 to 11 12 0	India	109	9 4 0 to 13 12 0	India.
		92	12 8 0 to 13 12 0	Continent	300	11 14 0 to 12 8 0	Continent	120	12 8 0 to 13 13 0	Continent	310	12 8 0 to 13 12 0	Continent	320	12 8 0 to 13 12 0	Continent.
9	S, M. Round	...	...	...	...	...	...	...	...	...	...	...	...	2,241	6 15 0 to 8 0 0	Not known.
10	S. M. Half Round	...	...	...	...	...	...	...	...	...	...	...	...	1 6	9 15 0 to 28 0 0	...
11	S. M. Squares	...	...	...	...	...	...	245	8 4 0 to 9 0 0	Britain	1,690	8 4 0 to 9 1 0	Britain	520	8 4 0 to 9 4 0	America.
								310	8 12 0 to 11 12 0	...	560	8 12 0 to 10 12 0	India	220	8 12 0 to 10 12 0	Britain.
														567	8 4 0	Not known.

LIST B—*contd.*

Item No.	Description of stores.	Purchase made during 1921-22.			Purchase made during 1922-23.			Purchase made during 1923-24.			Purchase made during 1924-25.			Purchase made during 1925-26.		
		Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.
12	S. M. Sheets, plain black and plate.	140	9 8 0 to 10 8 0	Not known	260	8 10 0 to 9 0 0	Continent	530	9 10 0 to 10 8 0	Not known	180	9 8 0 to 10 8 0	Not known	3,943	6 0 0 to 22 0 0	Not known.
		2,047	9 10 0 to 10 8 0	America	1,146	9 6 0 to 10 12 0	India	3,229	8 3 0 to 14 12 0	India	479	16 12 0 to 17 4 0	Continent	270	15 3 0 to 17 0 0	Continent.
		2,154	7 12 0 to 15 0 0	India	1,872	9 12 0 to 15 6 0	Britain	1,686	8 10 0 to 15 4 0	Britain	2,357	7 12 0 to 16 12 0	India	973	7 9 0 to 16 6 0	India.
		685	9 10 0 to 15 14 0	Britain	...	...	...	...	...	...	426	8 10 0 to 10 12 0	Britain	564	9 12 0 to 16 6 0	Britain.
12-A	S. M. Plate, Chequered	...	...	...	...	...	...	...	...	...	...	...	...	11	8 15 0 to 11 0 0	Not known.
13	Iron or S. M. sheets, galvd. corrugated.	135	16 8 0 to 17 12 0	America	205	14 12 0 to 16 4 0	Continent	572	12 4 0 to 14 12 0	America	650	16 0 0 to 17 3 0	America	352	16 4 0 to 18 4 0	Continent.
		227	17 4 0 to 18 8 0	Britain	149	17 4 0 to 17 12 0	Britain	448	16 4 0 to 17 12 0	Britain	580	16 12 0 to 17 4 0	Britain	6,210	14 7 0 to 17 4 0	Britain.
														31,332	13 12 0 to 16 8 0	Not known.
14	Steel Spring Flat	451	22 8 0 to 27 0 0	Britain	333	12 12 0 to 33 0 0	Not known	976	9 4 0 to 20 0 0	Not known	1,423	10 8 0 to 21 0 0	Not known	3,454	12 0 0 to 21 8 0	...
		160	22 0 0 to 112 0 0	Not known	...	...	...	...	...	...	...	...	...	...	...	...
14-A	Steel Spring Round	13	8 8 0 to 42 8 0	...	152	8 8 0 to 19 8 0	...	69	19 0 0 to 70 0 0	...	12	22 8 0 to 60 0 0	...	148	22 8 0 to 42 0 0	...
15	Steel Shear Flat	23	70 0 0 to 100 0 0	...	12	73 14 0 to 75 0 0	...	4	105 0 0	...	...	...	...	18	42 0 0 to 65 11 0	...
16	Iron or S. M. Wire Round, Galvd.	110	14 8 0 to 17 8 0	America	159	9 4 0 to 11 14 0	America	152	9 4 0 to 11 12 0	America	218	9 4 0 to 11 12 0	America	205	11 7 0 to 14 2 0	...
		15	8 12 0 to 11 12 0	Continent	164	13 12 0 to 14 8 0	Britain	123	9 12 0 to 14 8 0	Britain	114	13 12 0 to 14 8 0	Britain	135	7 12 0 to 8 8 0	America.
		231	9 12 0 to 47 9 0	Britain	...	...	...	36	8 2 0 to 19 0 0	Not known	...	...	...	256	8 12 0 to 14 12 0	Britain.
		1	28 0 0	Not known	...	...	...	...	...	...	...	...	...	...	...	...

LIST B—*contd.*

Item No.	Description of stores.	Purchase made during 1921-22.			Purchase made during 1922-23.			Purchase made during 1923-24.			Purchase made during 1924-25.			Purchase made during 1925-26.		
		Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.	Quantity in cwts.	Price per cwt. in Rs.	Country of origin.
17	S. M. Tee	180	9 8 0 to 10 12 0	India	168	9 4 0 to 10 8 0	India	114	9 4 0 to 10 8 0	India	175	8 12 0 to 10 8 0	India	322	7 4 0 to 10 8 0	Not known.
		36	11 12 0 to 12 4 0	Britain	153	11 12 0 to 12 4 0	Britain	65	11 12 0 to 12 4 0	Britain	104	11 12 0 to 12 4 0	Britain	43	8 12 0 to 10 8 0	India.
														80	11 12 0 to 12 4 0	Britain.
18	Wire Spring Steel	12	75 0 0 to 119 0 0	Britain	8	40 4 0 to 238 0 0	...	15	63 0 0 to 148 12 0	...	22	35 0 0 to 112 0 0	...	11	36 12 0 to 266 0 0	...
		21	36 8 0 to 500 0 0	Not known	...	...	...	...	...	...	...	...	...	...	...	...
		S. ft.			S. ft.			S. ft.			S. ft.			S. ft.		
19	Metal expanded	1,208	0 6 0 to 0 14 0	...	4,645	0 4 6 to 0 9 6	...	18,231	0 3 3 to 0 13 9	...	17,989	0 2 6 to 0 6 6	...	40,150	0 1 9 to 0 6 6	...
		Cwts.	p. s. ft.		Cwts.	p. s. ft.		Cwts.	p. s. ft.		Cwts.	p. s. ft.		Cwts.	p. s. ft.	
20	Iron S. M. Lowmoor	975	7 11 0 to 9 8 0	Britain	1,260	7 11 0 to 9 8 0	Britain	2,150	7 11 0 to 9 8 0	Britain	1,395	7 11 0 to 9 12 0	Britain	7,250	7 11 0 to 9 8 0	India.
		416	9 8 0 to 10 8 0	India	1,520	9 8 0 to 10 8 0	India	4,155	9 8 0 to 10 8 0	India	3,000	9 8 0 to 10 8 0	India	2,465	9 8 0 to 10 8 0	Britain.
		C.			C.			C.			C.			C.		
21	Tin sheets	...	...	...	1 0 18	36 0 0	Not known	2 1 10	19 13 0 to 29 0 0	Not known	38 0 4	36 0 0 to 38 11 5	Not known	16 2 12	32 10 0 to 43 10 0	Not known.
22	Nails Iron	55 2 7	27 0 0 to 43 0 0	Not known	323 3 0	15 4 0 to 56 0 0	...	368 3 26	1 11 0 to 8 0 0	...	384 3 9	10 0 0 to 41 0 0	...	554 0 3	10 4 0 to 80 8 0	...

LIST C.

List showing the probable consumption of steel and wrought iron materials other than rails and fishplates during the next five years.

Particulars.	Probable consumption of steel mild sections during the years.					Remarks.
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	
	Tons.	Tons.	Tons.	Tons.	Tons.	
Fabricated steel . .	5,600	5,600	5,600	5,600	5,600	
	Yards.	Yards.	Yards.	Yards.	Yards.	
Points rodding . . .	50,000	50,000	50,000	50,000	50,000	
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	
Iron sheets, galvd. corrugated	5,800	5,800	5,800	5,800	5,800	
Wind-ties, galvd. . .	220	220	220	220	220	
Wire, steel, galvd. for signals	500	500	500	500	500	
Nails, iron, wire, French .	740	740	740	740	740	
Beams, rolled, steel . .	7,800	7,800	7,800	7,800	7,800	
Iron bar, fire . . .	4,000	4,000	4,000	4,000	4,000	
Iron, best Yorkshire for drop stamping.	250	250	250	250	250	
Iron plates, chequered .	100	100	100	100	100	
Do. round Lowmoor .	200	200	200	200	200	
Do. sheets galvd. plain .	900	900	900	900	900	
Steel, cast, tool, flat, hexagon, round and square.	320	320	320	320	320	
Steel, mild, angle . .	8,100	8,100	8,100	8,100	8,100	
Do. mild bars, hexagon, black.	600	600	600	600	600	
Steel mild bars, hexagon, bright.	25	25	25	25	25	
Steel mild channel . .	700	700	700	700	700	
Do. flat . . .	19,400	19,400	19,400	19,400	19,400	
Do. half round .	30	30	30	30	30	
Do. hoop . .	160	160	160	160	160	

LIST C—*contd.*

List showing the probable consumption of steel and wrought iron materials other than rails and fishplates during the next five years.

Particulars.	Probable consumption of steel mild sections during the years.					REMARKS.
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	
Steel mild, rounds . .	45,000	45,000	45,000	45,000	45,000	
Do. square . .	3,500	3,500	3,500	3,500	3,500	
Do. tee . . .	1,300	1,300	1,300	1,300	1,300	
Do. plates . .	12,400	12,400	12,400	12,400	12,400	
Do. sheets . .	6,000	6,000	6,000	6,000	6,000	
Do. wire half round .	160	160	160	160	160	
Do. wire round .	160	160	160	160	160	
Do. wire galvd. $\frac{5}{16}$" .	800	800	800	800	800	
Steel round special for making taps.	20	20	20	20	20	
Steel, spring, flat . .	3,000	3,000	3,000	3,000	3,000	
Do. spring round . .	40	40	40	40	40	
	Nos.	Nos.	Nos.	Nos.	Nos.	
Tin plates . . .	3,500	3,500	3,500	3,500	3,500	
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	
Wire, steel, stitching iron tinned.	5	5	5	5	5	
Wire, iron bars, galvd. for telegraph.	400	400	400	400	400	
Wire, steel, tinned for banding armature.	1½	1½	1½	1½	1½	

LIST D.

List showing quantities of steel and wrought iron materials other than rails and fishplates required during 1926-27, for which Indent has been placed on the Chief Controller of Stores, Indian Stores Department, Simla.

Item No.	Description.	Total quantity required for 1926-27.	Contract placed in India with Messrs. The Tata Iron & Steel Co., Jamshedpore.				Contract placed with the Director-General, India Store Department, London.				REMARKS.
			Quantity contracted for.	Date of delivery.	Price per Cwt. f. o. r. Tatanagar.	Country of origin.	Quantity contracted for.	Date of delivery.	Price.	Country of origin.	
		Cwts.	Cwts.		Rs A. P.		Cwts.				
1	Sheets mild steel galvd. corrugated straight 5 inches pitch, 1½ inch depth of corrugation.	2,600	...	...	...	...	2,600	1,300 cwts. earliest possible delivery and balance by 1st September 1926.	Not known.	Not known.	The total quantities represent twelve months' requirements from 1st June 1926 to 31st May 1927.
2	Sheets mild steel galvd. corrugated curved for roofs 11 ft. radius, 10 ft. 9 in. when straight, 32" out width, 3" pitch, 18 B. G. thick, depth of corrugation ¾".	1,320	...	...	...	...	1,320	660 cwts. earliest possible delivery and balance by 1st September 1926.	Do.	Do.	Do.
3	Rolled steel joists in lengths of 35 ft.	6,860	4,260	2,130 cwts. by 1st June 1926. 2,130 cwts. by 1st September 1926.	7 0 0	India.	2,600	1,300 cwts. earliest delivery, 1,300 cwts. by 1st September 1926.	Do.	Do.	Do.

LIST D—*contd.*

List showing quantities of steel and wrought iron materials other than rails and fishplates required during 1926-27, for which Indent has been placed on the Chief Controller of Stores, Indian Stores Department, Simla.

Item No.	Description.	Total quantity required for 1926-27.	Contract placed in India with Messrs. The Tata Iron & Steel Co., Jamshedpore.				Contract placed with the Director-General, India Store Department, London.				REMARKS.
			Quantity contracted for.	Date of delivery	Price per Cwt. f. o. r. Tatanagar.	Country of origin.	Quantity contracted for	Date of delivery.	Price.	Country of origin.	
		Cwts.	Cwts.		Rs. A. P		Cwts.				
4	Steel mild angles . .	6,080	4,880	C. 3,040 by 1st June 1926. C. 1,840 by 1st September 1926.	7 0 0 to 7 12 0	India.	1,200	1st September 1926.	Not known.	Not known.	The total quantities represent twelve months' requirements from 1st June 1926 to 31st May 1927.
5	Steel mild channel . .	140	140	C. 70 by 1st June 1926. C. 70 by 1st September 1926.	7 0 0	Do.	...	...	...	...	..
6	Steel mild flats . . .	11,860	6,360	C. 5,930 by 1st June 1926. C. 430 by 1st September 1926.	7 4 0 to 7 8 0	Do. .	5,500	1st September 1926.	Not known.	Not known.	The total quantities represent twelve months' requirements from 1st June 1926 to 31st May 1927.
7	Steel mild round . .	31,700	26,800	C. 15,450 by 1st June 1926. 10,950 by 1st September 1926. C. 400 by August 1926.	7 8 0 to 8 0 0	Do. .	4,900	200 cwts. earliest delivery 4,700 cwts. by 1st September 1926.	Do.	Do.	Do.

8	Steel mild square	1,760	380	1st June 1926	7 8 0	Do.	1,380	500 cwts., earliest delivery and 880 cwts. by 1st September 1926.	Do.	Do.	Do.
9	Steel mild tee	600	...	...	...	...	600	300 cwts. earliest delivery, 300 by 1st September 1926.	Not known.	Not known.	Do.
10	Steel mild plates	7,670	4,060	1st June 1926	7 4 0	India	3,610	1st September 1926.	Do.	Do.	Do.
11	Steel mild sheets	4,380	2,040	1st June 1926	8 4 0 to 9 12 0	Do.	2,340	150 cwts., earliest delivery. 2,190 cwts by 1st September 1926.	Do.	Do.	Do.
12	M. S. wire galvd. annealed	700	...	...	...	...	700	350 cwts. earliest delivery; 350 cwts. by 1st September 1926.	Do.	Do.	Do.
13	Wind ties galvd.	120	...	...	...	...	120	60 cwts. earliest delivery; 60 cwts. by 1st September 1926.	Do.	Do.	Do.

N. B.—2 per cent. commission and inspection charges to be added to the prices f. o. r. Tatanagar.

LIST E.

Statement showing full particulars of contracts entered into with various firms in India for fabricated steel work during 1926-27.

Serial No	Particulars.	Weight.	Amount of Contract.	Name of Firm.	Date of Delivery.	REMARKS.
		Cwts.	Rs.			
1	Steel work for 3 spans skew 40′—½″ clear for Lalamusa-Malakwal Section, Rawalpindi Division.	852	1,685	Messrs. Burn & Co., Ltd., Howrah.	22 weeks from 7th April 1926.	
2	Steel work for one skew span 58′—5″ centres of bearing for Lahore-Montgomery Section, Lahore Division.	596-6	8,325	Messrs. Braithwaite & Co., Ltd., Bombay.	8-10 weeks from date of receipt of raw material by the firm from England.	
3	Steel work for 8 spans 28′—10″ clear for Ludhiana-Umballa and Umballa-Saharanpur Sections.	1,362	9,876	Ditto	Ditto	
4	Bearing and bed plates for certain sections of N. W. Railway.	1,083	14,662	Ditto	Commence 4 to 6 weeks from date of receipt of material and delivery 1 wagon load after 15 days.	
5	Steel work for girder spans for various sections on N. W. Railway—					
	126 spans of sizes	13,529	1,58,395	Ditto	First span in 6 weeks from date of receipt of raw material and remainder at the rate of 200 tons per month.	
6	25 spans of sizes	3,395	37,759	Messrs. T. Cosser and Co., Ltd., Karachi.	To commence in 12 weeks and complete in 32 weeks.	
7	Steel work for girder spans required for Ferozepur Weir on Lahore Division (36 spans 60 ft. clear).	22,119	2,80,499	Kumardhubi Engineering Works, Ltd., Kumardhubi.	4 spans after 20 weeks from 8th June 1926 and balance at 4 spans per month thereafter.	

10. SOUTH INDIAN RAILWAY.

Letter, dated 8th October 1926.

I have the honour to subjoin my replies seriatim to the questionnaire forwarded with your No. 217 of 8th May 1926:—

1.

Particulars of purchases.	Open Line.									
	1921-22.		1922-23.		1923-24.		1924-25.		1925-26.	
	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.
	Tons.	Rs.	Tons	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
Rolled steel	887	4,26,515	1,864	6,03,417	925	2,10,953	1,097	1,94,850	3,782	8,36,910
Wire and wire nails.	8	12,964	15	11,354	53	17,183	14	8,305	30	12,320
Tinplates .	0·1	101	6	3,521	8	4,608	2	2,234	2	2,216
Fabricated steel.	3·2	3,783	359	1,30,192	979	2,65,176	563	1,66,642	2,046	5,75,728

Note.—The amounts represent the c.i.f. price in sterling converted into the rate of exchange then current. Both the quantities and amounts are only approximate. All these stores were obtained from Great Britain.

Particulars.	Loco Schemes and Construction.									
	1921-22.		1922-23.		1923-24.		1924-25.		1925-26.	
	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.	Quantity.	Amount.
	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.	Tons.	Rs.
Rolled steel	...	...	15	3,200	10	2,100	143	43,193	9,281	14,11,546
Wire and wire nails.	...	...	...	...	...	...	...	...	7	2,335
Tinplates .	...	...	...	...	...	...	...	...	...	...
Fabricated steel.	...	...	46	35,769	3,866	9,87,039	3,464	10,51,992	4,559	12,69,477

Note.—The amounts represent the c.i.f. price in sterling converted into the rate of exchange then current. Both the quantities and amounts are only approximate. All these stores were obtained from Great Britain with the exception of a very small quantity purchased in India.

Open Line.

2. (*a*) Based on the items affected by the protective duties, such as angles, wire and wire nails, tinplates, bridge-work and steel buildings, the increased Capital and Revenue expenditure of the railway stood as under from 13th June 1924, the date from which the revised tariff rates came into force:—

	Capital.	Revenue.
	Rs.	Rs.
1924-25	2,090	451
1925-26	54,104	13,173

(*b*) The items affected being essential to a railway for ordinary maintenance and construction, protective duties did not materially affect the purchase of stores of this nature.

(*c*) The extra expenditure in this direction during the next five years will be as under if the duty at the present rate is maintained:—

	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
	Rs.	Rs.	Rs.	Rs.	Rs.
Revenue	32,225	35,858	62,677	28,047	825
Capital	2,01,910	70,401	85,838	5,902	...

Construction and Loco. Scheme.

(*a*) Based on the items affected by the protective duties, such as angles, wire and wire nails, tinplates, bridge-work and steel buildings, the increased capital expenditure of Loco. Scheme and Constructions stood as under from 13th June 1924, the date from which the revised tariff rates came into force:—

	Capital.
	Rs.
1924-25	1,30,515
1925-26	1,45,798

(*b*) The items affected being essential to a railway under construction protective duties did not materially affect the purchase of stores of this nature.

(*c*) The extra expenditure in this direction during the next five years will be as under if the duty at the present rate is maintained:—

——	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
	Rs.	Rs.	Rs.	Rs.	Rs.
Capital	3,16,659	63,662	1,00,722	83,532	...
Revenue . .	18,536	12,324	12,716	No programme proposed.	

3.

Particulars.	OPEN LINE. Quantity in tons.				
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Rolled steel . . .	489	515	524	540	575
Wire and wire nails . .	5	6	6	6	6
Tinplates . . .	2	2	2	3	3
Fabricated steel . . .	6,370	2,926	4,128	986	...

Particulars.	LOCO SCHEMES AND CONSTRUCTION. Quantity in tons.				
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Rolled steel . .	80	..	...	...	...
Wire and wire nails . .	75·5	60	40	62	...
Tinplates	...	...	...	...	...
Fabricated steel . .	19,917	18,558	17,790	19,576	...

4 and 5. No contracts have been entered into for the supply of these classes of materials during the next five years.

6. Speaking generally so far we have not been able to see any difference in the quality of the material manufactured on the Continent as compared with Great Britain.

XIX.—Questionnaire issued by the Tariff Board to the Railway Board and Railways.

Steel castings for locomotives, railway carriages and wagons.

1. Please give a list of the principal steel castings required for locomotives, carriages and wagons respectively. Does the following list of castings which the Hukumchand Electric Steel Works Company claim to be in a position to be able to manufacture out of scrap steel include all these classes?

(*a*) *Locomotive.*—Axle Boxes, Buffers, Bogie Frame Stays, Motion Plates, Distance pieces, Piston Valve Heads, Wheel centres, Horn blocks, etc.

(*b*) *Carriage and Wagon.*—Axle Boxes, Buffers, Bogie Centre Brackets, Queen Posts, Top Bolster Spring Bearings, Bottom Side Bearers, Sleeve Washers, Spring Sleeves, Spring Caps, Top and Bottom Side Bearers.

2. Have any of these classes of castings been standardized so as to permit of their use in more than one type of locomotive, carriage or wagon?

3. In your opinion is there any inherent difficulty involved in the process of manufacture or in obtaining raw material which would prevent the economic production in India of these classes of castings?

4. Kindly state the total weight of the principal classes of steel castings used by your railway each year from 1921-22 onwards under the following heads:—

(*a*) Imported as such.

(*b*) Manufactured in India elsewhere than in your workshops.

(*c*) Manufactured in your workshops.

5. Please state the price per cwt. paid for each of the principal classes of steel castings falling under headings (*a*) and (*b*) in question 4 for each year from 1921-22 onwards.

N.B.—1. For castings imported from the Continent, please distinguish the country of origin.

2. For both British and Continental castings please state where possible the sterling f.o.b. prices and the charges for freight, landing, etc., separately. If this is not possible, please state the c.i.f. price in sterling.

6. What arrangements are made for testing castings imported from the Continent—

(*a*) in the country of origin,

(*b*) in India?

7. In the case of castings manufactured in your own workshops, please state the raw materials from which they were manufactured and give the average works cost per cwt. of finished production under the following headings:—

	Quantity.	Value.
(1) Materials, *e.g.*, scrap, refractories, fluxes, stores, etc.		
(2) Cost above materials, *e.g.*—		
Power		
Fuel		
Repairs		
General Works Supervision		
Miscellaneous		

8. What is the percentage of rejected castings in your own workshops?

9. If you manufacture axle boxes in your workshops, please give separately for these the particulars specified in question 7.

10. If you have any experience of steel castings manufactured in India (elsewhere than in your own workshops), please state the names of the makers and give your views in regard to their quality and workmanship compared with those of the imported article.

11. Kindly state the approximate weights and prices, if ascertainable, of steel castings forming parts of locomotives, carriages and wagons either imported and re-erected or built in India, by your railway for each year from 1921-22 onwards.

12. (*a*) Kindly furnish an estimate of the annual requirements of your railway during the next five years of steel castings:—

(1) for repairs and renewals of locomotives, wagons and carriages;

(2) as parts of locomotives, wagons and carriages imported and re-erected or built in India by your railway.

(*b*) To what extent will it be possible to meet these requirements from your own workshops?

13. Please state the quantity of steel castings used by you for general engineering purposes for each year from 1921-22 onwards. To what extent have your requirements of these been met from your own workshops?

14. Please state the prices per cwt. at which your railway has purchased steel castings for general engineering purposes in each year from 1921-22 onwards.

N.B.—For castings purchased from the United Kingdom or the Continent, please give the particulars specified in question 5.

15. Please give an approximate estimate of your requirements of steel castings for general engineering purposes for the next five years.

16. Has your Railway as yet adopted any definite scheme for the replacement of cast iron with steel axle boxes? If so, how long is the process of replacement likely to take and what will be your annual requirements of steel axle boxes under this scheme?

17. How does the durability of the steel axle box compare with that made of cast iron?

18. Please state what is the present position as regards the adoption of Automatic Centre Buffer Couplers. On the assumption that your railway decide on this course, has any definite scheme been framed, and, if so, what will be your total requirements and your annual requirements for each of the next 5 years?

19. Please state whether, in your opinion, all the necessary castings for Automatic Centre Buffer Couplers can be made out of materials available in India. If you do not consider this possible, please give your reasons.

20. What has been the average annual amount of steel scrap which your railway has placed on the market each year since 1921-22, and what has been the average price per ton realized f.o.r. works. How much of this scrap consisted of borings, turnings, shavings, etc., and what was the average selling price per ton f.o.r. works?

21. Please state the location of your principal workshops and the railway freight per cwt. for the carriage of castings from Calcutta to the workshop. For imported castings please state also the railway freight from the port of importation to the workshop.

22. In the event of the industry making out a case for the grant of protection, have you any views as to the form which this protection should take?

XX.—Replies to questionnaires regarding steel castings for Locomotives, etc.

1. THE ASSAM-BENGAL RAILWAY COMPANY, LIMITED.

Letter dated the 26th June 1926.

With reference to your letter No. 226, dated the 10th May 1926, I have the honour to forward herewith for your disposal a copy of the replies to the questionnaire on the above subject drawn up by my Superintendent of Stores in consultation with the Locomotive Superintendent.

As regards the reply to question 22 whilst admitting the desirability of being able to obtain good steel castings in India I would strongly deprecate any bounty feed or protection scheme and see no reason why Iron and Steel Manufacturers in India should not stand or fall on their ability to compete in the open market with the products of other countries both as regards cost and quality of work turned out.

Replies to questionnaire regarding steel castings for locomotives, railway carriages and wagons.

1. Enclosed is a list of the principal steel castings required for our locomotives, carriages and wagons.

(*a*) and (*b*) As far as can be judged from the description given the list of castings which the Hukumchand Electric Steel Works claim to be in a position to manufacture covers all steel castings required for the maintenance of locomotives, carriages and wagons on this railway.

2. All axle boxes of the various classes of the Standardization Committee's type on this railway are standard: four classes of locomotives using the same axle box for the coupled wheels, three classes the bogie axle boxes are the same and three classes the tender axle boxes are all interchangeable. The cast steel buffer heads of all classes of locomotives are also of one pattern. We have a very large number of classes of coaching and goods stock but we have only five types of axle boxes for these. The cast steel buffer heads are standard and of one pattern for all our coaching and goods stock.

3. As far as I am aware there is no inherent difficulty involved in the process of manufacture or in obtaining raw material which will prevent economic production in India of cast steel castings for our rolling stock.

4. (*a*) Imported.

	C.	Q.	lb.
1921	143	1	4
1922	180	1	26
1923	105	1	4
1924	89	2	15
1925	32	3	24

(*b*) Cast in India.

	C.	Q.	lb.
1921	13	4	21
1922	50	1	13
1923	30	3	18
1924	47	1	26
1925	109	3	1

(*c*) We have no plant for the manufacture of steel castings in the Railway Workshops at Pahartali.

	Rs.	A.	P.		
5. (*a*) Imported.					
1921	144	2	6	per cwt.	c. i. f. price.
1922	135	13	3	,,	
1923	105	5	9	,,	
1924	180	14	7	,,	
1925	122	0	10	,,	
(*b*) Cast in India.					
1921	41	15	0	per cwt.	
1922	31	8	11	,,	
1923	40	5	0	,,	
1924	41	3	6	,,	
1925	43	6	9	,,	

NOTE.—The prices given above appear very much in favour of the Indian manufacture. But it must be recognized that the Indian price represents the bare casting f.o.r. manufacturers' siding. Patterns and core boxes are supplied by us and all machining done in the Railway Workshops. English castings are received ready finished. Take an engine driving wheel axle box, it comes out fitted with brass channel liners and crown bearing brasses complete and ready for service which is quite different to the rough foundry casting.

(1) As far as our records show no steel castings have been imported from the Continent.

6. (*a*) All steel castings whether made in England or on the Continent are inspected by Inspectors under our Consulting Engineers.

(*b*) No arrangements have so far been made for the testing of castings made in India.

7. Please refer to paragraph 4 (*c*).

8. Please refer to paragraph 4 (*c*).

9. Please refer to paragraph 4 (*c*).

10. We have obtained steel castings from Messrs. Hukumchand Electric Steel Works and also from the Kirtyanand Iron and Steel Works. The quality and workmanship of the castings turned out by both these foundries do not compare favourably with the English made articles. The castings are often very rough and in the case of buffer heads are often warped and they require very careful setting up in a machine to get the faces true with each other.

11. The approximate weights of steel castings imported is as follows:—

Locomotives—	Cwts.
1921	*Nil.*
1922	1,576
1923	*Nil.*
1924	*Nil.*
1925	*Nil.*
1926	*Nil.*

Carriage and Wagon—	Cwts.
1921	*Nil.*
1922	85
1923	2,381
1924	578
1925	82
1926	*Nil.*

I regret being unable to give the information asked in this paragraph as regards prices. Contracts for locomotives, carriages and wagons are for the complete locomotive and wagon or complete underframe for the carriage as the case may be. No detail prices are given in any of our invoices.

12. (*a*) (1) From past consumption it is estimated that our requirements of cast steel will not be more than seven tons per annum during the next five years.

(2) The estimated requirements of steel casting as parts of locomotives, carriages and wagons to be imported are as follows:—

	Cwts.
1926-27	2,685
1927-28	1,131
1928-29	642
1929-30	628
1930-31	628

(*b*) It is not anticipated that we shall put down a steel plant for a number of years to come so that none of our requirements for steel castings will be met from our own workshops.

13, 14 and 15. Practically no steel castings are used by the Engineering Department and the quantity either used or likely to be used would not amount to one ton in five years.

16. Only a small proportion of the rolling stock on this railway is fitted with cast iron axle boxes. For such stock we have not adopted any definite scheme for the replacement with cast steel axle boxes and have no intention of adopting such a policy. Any box broken is replaced with a cast steel box, beyond this we shall not replace cast iron boxes.

17. Cast steel boxes do not break in the case of ordinary derailments as cast iron boxes do. Beyond this the life of a cast iron box is equal to a cast steel one. Should a cast iron box wear badly in the axle guard channels it can be lined up at much less expense than replacing with a cast steel box.

18. We have no experience of automatic centre buffer couplers, all our stock being fitted with the Jones' centre buffer. It is not anticipated that we shall depart from our present standard.

19. It is impossible to pass an opinion without experience of the automatic centre buffer couplings.

20. The annual amount of steel scrap sold is as follows:—

	Tons.		
1921	22·65	average price	Rs. 24-0-0 per ton.
1922	120·00	,,	Rs. 17-4-0 ,,
1923	128·00	,,	Rs. 10-5-4 ,,
1924	*Nil.*		...
1925	123·625	,,	Rs. 11-8-0 ,,

We have so far not been able to obtain a purchaser for any of our steel borings, turnings, shavings, etc., no offer ever having been received for same.

21. The Railway main workshops are situated at Pahartali 2¾ miles from Chittagong. The railway freight from Calcutta to Pahartali is Re. 0-8-6 per cwt. Imported castings are landed at the Port of Chittagong, the railway freight from the Port to Pahartali being 1½ pie per cwt., both rates are railway material concessional rates.

STEEL CASTINGS FOR K-4 CLASS ENGINE.

Item No.	Names of Parts.	Number per engine.	Remarks.
1	Frame stretcher in front of fire box . .	1	
2	Motion plate frame stretcher . . .	1	
3	Stretcher plate between L. & D. wheels .	1	
4	Slide bar bracket (right)	1	
5	Do. „ (left)	1	
6	Drag casting	1	
7	Axle box (coupled wheels) . . .	8	
8	„ „ bogie	4	
9	Bogie horn plate clip	4	
10	Driving horn block	2	
11	Leading & Trailing horn block (right) .	3	
12	Do. do. („) .	3	
13	Do. do. (left) .	3	
14	Do. do. („) .	3	
15	Bogie axle box guide (right) . . .	2	
16	Do. do. („) . . .	2	
17	Do. do. (left) . . .	2	
18	Do. do. („) . . .	2	
19	Platform support (1st. & 3rd) . . .	4	
20	Do. (front)	2	
21	Reversing screw bracket	1	
22	Buffer head	1	
23	„ spring casing	2	
24	„ „ washer	2	
25	Draw bar shank washer	1	
26	Brake shaft carrier (centre) . . .	1	
27	Side spring socket	1	
28	„ „ „ washer	1	
29	Frame stretcher (bogie)	1	

STEEL CASTINGS FOR K-4 (TENDER).

Item No.	Names of Parts.	No. per tender.	Remarks.
	Tender.		
1	Drag casting	1	
2	Hind draw box	1	
3	Axle box (front & hind)	8	
4	„ „ (door)	8	
5	Frame fork keep	8	
6	Bogie centre top casting	2	
7	„ „ bottom „	2	
8	Side stop	8	
9	Brake hanger bracket	8	
10	Hand brake shaft carrier	2	

K-4 BOILER.

1	Fire door	1	
2	Smoke-box bottom casting	1	
3	Bogie centre casting	1	

GOODS STOCK TYPE $\frac{\text{C. G.}}{10}$ (4-wheeled).

1	Horn check	8	
2	Buffer head for yoke buffer	1	
3	„ „ hook „	1	
4	Draw spring washer	2	
5	Spring case inside	2	
6	„ „ outside	2	
7	Cylinder carrier	2	
8	Axle box	4	

COMPOSITE 1ST AND 2ND CLASS CARRIAGE. TYPE $\frac{C.\ L.}{2}$

Item No.	Names of Parts.	No. per vehicle.	Remarks.
1	Bogie top centre pivot	2	
2	„ bottom „ „	2	
3	Bolster suspending cross bar casting . .	4	
4	Bottom side bearer	4	
5	Side bearing spring cup	8	
6	Bufferhead for yoke buffer . . .	1	
7	„ „ hook „ . . .	1	
8	Draw spring claw washer	2	
9	Outside spring case	2	
10	Inside „ „	2	
11	Axle box	8	

BOGIE TIMBER TRUCK TYPE $\frac{T.\ T.}{4}$

1	Horn Cheek	8	
2	Spring hanger bracket	16	
3	„ „ „	16	
4	Cylinder carrier (vac.)	4	
5	Bogie side bearer	4	
6	Bufferhead for yoke buffer . . .	1	
7	„ „ hook „ . . .	1	
8	Draw spring washer	2	
9	Inside spring case	2	
10	Outside „ „	2	
11	Axle box.	8	

2. BENGAL-NAGPUR RAILWAY.

Letter dated the 28th September 1926.

With reference to your letter No. 226, dated the 10th May 1926, I beg to send herewith six copies of my replies to Tariff Board questionnaire regarding steel castings for locomotives, railway carriages and wagons.

Replies to Questionnaire regarding Steel Castings for Locomotives, Railway Carriages and Wagons.

1. (*a*) Yes.

(*b*) Yes.

2. Yes.

3. No.

4. (*a*) Weight of steel castings *imported.*—Loco. duplicates.—1922—4 tons; 1923—*Nil;* 1924—11 tons; 1925—25 tons; 1926 to date—42 tons.

Weight of steel castings *imported.*—Carriage and wagon duplicates.—1922—220 tons; 1923—72 tons; 1924—56 tons; 1925—52 tons; 1926 to date.—30 tons.

(*b*) Weight of steel castings *locally made.*—Loco. duplicates.—1922—2 tons; 1923—10 tons; 1924—7 tons; 1925—30 tons; 1926 to date—11 tons.

Weight of steel castings *locally made.*—Carriage and wagon duplicates.—1922—28 tons; 1923—12 tons; 1924—12 tons; 1925—2 tons; 1926 to date—7 tons.

(*c*) Weight of steel castings manufactured in our Workshops all classes.—1922—*Nil;* 1923—*Nil;* 1924—*Nil;* 1925—*Nil;* 1926 to date—*Nil.*

5. (*a*) Price per cwt. paid for steel castings part machined *imported c.i.f. price.*—1922—£2-13-6; 1923—£2-9-0; 1924—£2-8-0; 1925—£2-9-0; 1926 to date—£2-10-0.

(*b*) Price per cwt. paid for steel castings part machined *local manufacture.*—1922—Rs. 100; 1923—Rs. 42; 1924—Rs. 40; 1925—Rs. 33; 1926 to date.—Rs. 37.

The above prices are only approximate, rates vary very considerably according to the size and intricacy of casting, no apparent variation in rate can be detected for different classes of casting, prices for each class vary over whole range. Imported castings are in most cases machined.

No Continental castings are imported.

6. The question does not arise.

7. We do not manufacture steel castings.

8. *Nil.*

9. We do not manufacture.

10. *Ishapore—During War time.*

Quality and workmanship good but difficulty in machining due to hardness.

Messrs. Hukum Chand.

Out of an order for steel piston heads 80 per cent. had blow holes necessitating electric welding and greatly increasing the cost of machining.

The firm on being approached went into the question and submitted new samples of axle-box and piston heads which were free from blow holes when machined.

11. See reply to paragraphs 4 and 5.

12. (*a*)

(1) Probable annual requirements—Locomotive Carriage and Wagon duplicates for repairs per annum—Tons 140.

(2) Not available.

(*b*) *Nil.*

13, 14 and 15. Information already supplied in connection with questionnaire for rails and fishplates. Further information will follow in connection with questionnaire regarding steel materials other than rails and fishplates.

16. We have no cast iron axle-boxes.

17. 5 to 1.

18. " Willison " couplers are on trial on this Railway. No definite scheme has yet been framed. The matter is being dealt with by the Railway Board.

19. Yes.

Year.	Mis. W. I. and M. S. scrap, (Plates, rivets, bolts, angles, crop ends, etc.)		Spring steel scrap. (Laminated, spiral and volute.)		Cast steel scrap. (Axle-boxes, castings and ramps.)		Loco. Carriage and Wagon condemned steel tyres.		Scrap rails. Sold in Central Disposal.		Scrap steel sleepers Sold in Central Disposal.	
	Approx.	Average rate.	Approx.	Average rate.	Approx.	Average rate.	Approx.	Average rate.	Approx.	Average rate.	Approx.	Average rate.
	Tons.	Per ton. Rs. A. P.	Tons.	Per ton. Rs. A. P.	Tons.	Per ton. Rs. A. P.	Tons.	Per ton. Rs. A. P.	Tons.	Per ton. Rs. A. P.	Tons.	Per ton. Rs. A. P.
1922 . . .	513	34 0 0	327	51 0 0	...	...	206	26 8 0	...	...	...	...
1923 . . .	1,000	33 0 0	255	48 0 0	16	30 0 0	350	27 0 0	...	..	...	...
1924 . . .	1,477	23 0 0	170	55 0 0	63	27 0 0	234	24 0 0	270	40 0 0	250	35 0 0
1925 . . .	175	22 0 0	124	40 0 0	10	25 0 0	234	25 0 0	470	42 0 0	430	36 0 0
1926 . . .	462	20 0 0	573	49 0 0	58	16 0 0	132	15 8 0	300	30 0 0	260	33 0 0
1926* . . .	3,500	19 8 0	1,000	50 0 0	100	16 8 0	250	14 0 0	...	...	...	...

* Material auctioned on 28th August 1926 and not yet delivered.
All materials imported *vid* Calcutta.

21. Khargpur.

Railway freight per ton Calcutta-Khargpur—

Ordinary rate Rs. 7-1-0.
Railway Material rate Rs. 2-11-1.

22. I have no suggestions to offer.

3. BOMBAY, BARODA AND CENTRAL INDIA RAILWAY COMPANY, LIMITED.

Letter, dated the 1st July 1926.

As desired in your letter No. 226 of 10th May 1926, I beg to send herewith a copy with six spare copies of my replies to the questionnaire relating to the purchase by this administration of steel castings for locomotives, railway carriages and wagons. Seven copies of the list and statement referred to therein are also enclosed.

Replies to questionnaire relating to the purchase of steel castings for locomotives, railway carriages and wagons.

Questions.	Carriage and Wagon Superintendent's answers.	Loco. Superintendent Ajmer's answers.	Loco. and Carriage Superintendent Parel's answers.
1. Please give a list of the principal steel castings required for locomotives, carriages and wagons respectively. Does the following list of castings which the Hukumchand Electric Steel Works Company claim to be in a position to be able to manufacture out of scrap steel include all these classes ? (*a*) *Locomotives*—Axle boxes, Buffers, Bogie frame stays, Motion plates, Distance pieces, Piston valve heads, wheel centres, Horn blocks, etc. (*b*) *Carr. and Wagon*—Axle boxes, Buffers, Bogie centre brackets, Queen Posts, Top bolster spring bearings, Bottom side bearers, Sleeve washers, Spring sleeves, Spring cups, Top and bottom side bearers.	The following are the principal items of steel castings used by the Carriage and Wagon Department only :— Cast steel axle boxes, wheel centres, buffers, buffer casings, buffer spring washers, buffer spring sleeves, buffer inside spring cups, bogie side bearers, auxiliary bearing spring cups, bolster swing links, cylinder carriers, brake shaft levers, brake block hanger brackets, truss rod brackets, bolster swing link castings, wagon door chainless cotters, hand brake clutches and various other castings. We also manufacture Loco. spectacle plates, Loco axle boxes and Broad Gauge axle boxes for Carriage and Wagon stock etc. (*b*) This list does not comprise all castings required in Carriage and Wagon work.	1(*a*) *Vide* List A attached. "Description Column."	1(*a*)—Slide bar brackets, Platform supports, Drag castings, Reversing Link carrier, wheel centres, axle box guides, horn plate clips, compensating beam carriers, bogie centres, axle boxes pivot for radial arm, draw book guides, etc., which *includes* the list (*a*) and (*b*) given in question 1.
2. Have any of these classes of castings been standardized so as to permit of their use in more than one type of locomotive carriage or wagon?	Yes, chiefly in new Carriage and Wagon stock and in lesser degree in old stock.	*Vide* List "A" attached. Items are marked with an asterisk.	Wagon axle boxes and bogie centres have been standardized.

3. In your opinion is there any inherent difficulty involved in the process of manufacture or in obtaining raw material which would prevent the economic production in India of these classes of castings ?	*No, providing the plant adopted was suitable and properly worked.*	....	*We are not in a position to offer an opinion regarding the economic production of these castings in India.*
4. Kindly state the total weight of the principal classes of steel castings used by your railway each year from 1921-22 onwards under the following heads :—	....	4, 4(*a*), 4(*c*). *Vide* List "A" attached.	Total weight approximately 100 tons. Manufactured in Ajmer Workshops.
(*a*) Imported as such . .	Imported for Carr. and Wagon use only :—	T. C. Q. lb. 123 19 0 7	
	1921-22 . . . . 129 *tons* 1922-23 . . . . 222 ,, 1923-24 . . . . 92 ,, 1924-25 . . . . 183 ,, 1925-26 . . . . 160 ,,		
(*b*) Manufactured in India elsewhere than in your workshops.	*Nil.*	375 1 3 24 Manufactured in Ajmer Workshops.	
(*c*) Manufactured in your Workshops.	Manufactured for Carriage and Wagon Department's use only. 1921-22 . . . . 170 tons 1922-23 . . . . 441 ,, 1923-24 . . . . 637 ,, 1924-25 . . . . 483 ,, 1925-26 . . . . 813 ,,		
5. Please state the price per Cwt. paid for each of the principal classes of steel castings falling under headings (*a*) and (*b*) in question 4 for each year from 1921-22 onwards.	....	*Vide* List "A" attached.	No experience.

BRANCH OF THE STATIC

Questions.	Carriage and Wagon Superintendent's answers.	Loco. Superintendent Ajmer's answers.	Loco. and Carriage Superintendent Parel's answers.
N.B.—1. For Castings imported from the Continent, please distinguish the country of origin.	(*a*) Cast steel wheel centres only have been imported and as they are received as part of complete wheels and axles, no price of the steel wheel centres can be separated.	....	
2. For both British and Continental castings, please state where possible the sterling f. o. b. price and the charges for freight, landing, etc., separately. If this is not possible, please state the c.i.f. price in sterling.	Regret, cannot be given for reasons quoted above.	....	
6. What arrangements are made for testing castings imported from the Continent?	....	....	No experience.
(*a*) In the country of origin .	Cannot say.	....	(*a*) *Nil.*
(*b*) In India	*Nil*, we only test our own manufactures.	....	(*b*) Tests are carried out by our own staff in Ajmer.
7. In the case of castings manufactured in your own workshops, please state the raw materials from which they were manufactured and give the average works cost per cwt. of finished production under the following heads :—		....	No experience.

During 1925-26.

Material.	Quantity.	Value.
	Cwt. Qr. lb.	Rs. A.
Ferro Silican . . .	4,160 0 12	35,265 15
Ferro Manganese . .	368 1 23	6,268 0
Aluminium . . .	10 1 3	914 11
Hematite Pig . .	12,159 0 8	70,395 7
Silican Electro . .	28 2 25	855 12
TOTAL .	16,726 2 15	113,699 13

Outturn 18,523 cwts. Rate Rs. 22-15 per cwt.

(1) *Materials, e.g.* . . . .

During 1925-26.

Material.		Quantity.	Value.
		Cwt. Qr. lb.	Rs. A.
Scrap	Foundry scrap, tyre, spring, buffers and miscellaneous steel scrap.	18,534 0 7	21,842 2
Refractories . . .	Fire clay . . .	1,314 2 12	1,576 12
	Fire bricks 14,750 only .	..	1,454 12
	Silica bricks 18,216 only .	..	9,293 10
	TOTAL .		12,325 2
Fluxes	Lime Stone . . .	3,342 0 0	1,015 0
Stores	Nails	61 1 4	1,014 10
	Brads	77 1 4	2,129 10
	Wire	16 1 4	272 9
	Rope	2 3 22	39 2
	TOTAL .	157 3 6	3,455 15

(2) Cost of above materials, *e.g.*—

	Rs.	A.	P.
Power	48,456	4	0
Fuel	39,699	9	0
Labour	99,650	6	0
Repairs	24,252	0	0
General Works Supervision	38,259	2	0
Miscellaneous . . .	21,912	1	0
	c2,72,229	6	0

Questions.	Carriage and Wagon Superintendent's answers.	Loco. Superintendent Ajmer's answers.	Loco. and Carriage Superintendent Parel's answers.
8. What is the percentage of rejected castings in your own workshops ?	The tests made for the last five years have not justified any large rejections. Individual castings are sometimes rejected but the percentage is so small as to be negligible and no records are available.	....	No experience.
9. If you manufacture axle boxes in your workshops, please give separately for these the particulars specified in question 7.	We manufacture axle boxes in fairly large quantities and only charge a flat rate per Cwt. This is at present Rs. 26 for Home Railway and Rs. 35 for foreign railways.	....	No experience.
10. If you have any experience of steel castings manufactured in India (elsewhere than in your own workshops), please state the names of the makers and give your views in regard to their quality and workmanship compared with those of the imported articles.	No experience, as we are able to meet our own requirements.	....	No experience.
11. Kindly state the approximate weights and prices, if ascertainable, of steel castings forming parts of locomotives, carriages and wagons either imported and re-erected or built in India by your railway for each year from 1921-22 onwards.	No remarks, see para 5.	*Vide* List "A" attached last page 10.	Prices are not ascertainable as these castings are partly the component parts of a locomotive in the whole. The weight of engine castings is approximately 10 tons per annum, wagon axle boxes 90 tons.

12. (*a*) Kindly furnish an estimate of the annual requirements of your railway during the next five years of steel castings :—	....	*Vide* List "A" attached.	12.(*a*) *100 tons per annum for the next 4 years.*
(1) for repairs and renewals of locomotives, wagons and carriages ;	About 450 tons per year.	T. C. Q. lb. 283 13 2 3	(1) Ten tons for repairs of locomotives.
(2) as parts of locomotives, wagons and carriages imported and re-erected or built in India by your railway.		934 7 3 25	(2) 90 tons for repairs wagon axle boxes.
(*b*) To what extent will it be possible to meet these requirements from your own workshops ?	Have had no difficulty in meeting demands in the past and anticipate no difficulty in future years.	....	(*b*) To the full extent.
13. Please state the quantity of steel castings used by you for general engineering purposes for each year from 1921-22 onwards. To what extent have your requirements of these been met from your own workshops ?	*Die blocks (Special steel).* 1921-22 . . . . *Nil.* 1922-23 . . . . *Nil.* 1923-24 . . . . 10 tons 1924-25 . . . . 8½ ,, 1925-26 . . . . 6 ,,	....	A few cwts. are met from our own workshops.
14. Please state the prices per cwt. at which your railway has purchased steel castings for general engineering purposes in each year from 1921-22 onwards.	*Nil.*	....	We have not purchased steel castings from outside firms.
15. Please give an approximate estimate of your requirements of steel castings for general engineering purposes for the next five years.	*Die blocks (Special steel).* 1927-28 . . . . 8 tons 1928-29 . . . . 8 ,, 1929-30 . . . . 8 ,, 1930-31 . . . . 8 ,, 1931-32 . . . . 8 ,,	....	About 1 ton per annum.

Questions.	Carriage and Wagon Superintendent's answers.	Loco. Superintendent Ajmer's answers.	Loco. and Carriage Superintendent Parel's answers.
16. Has your Railway as yet adopted any definite scheme for the replacement of cast iron with steel axle boxes? If so how long is the process of replacement likely to take and what will be your annual requirements of steel axle boxes under this scheme?	For new stock only, the annual requirements for which will be 2000 boxes, approximately 50 tons. It is not generally contemplated refitting old stock with cast steel boxes.	70 per cent. for Locomotives, *i.e.*, all the heavier types are fitted with cast steel axle boxes. The remaining 30 per cent. have axle boxes made from cast iron and gun metal. It is not proposed to alter these as the engines so fitted are very old and are earmarked for replacement within the next five years.	Yes. We are replacing all wagon stock with cast steel boxes and the process is likely to take four years.
17. How does the durability of the steel axle box compare with that made of cast iron?	There is no comparison, although cast iron boxes do fairly well for the Metre Gauge System, they are useless for Broad Gauge System.	No records are available to show the durability of the cast steel box as compared with one made from cast iron. The latter was however found totally unsuitable for the heavy type of locomotive.	Very favourably.
18. Please state what is the present position as regards the adoption of Automatic Centre Buffer Couplers. On the assumption that your Railway decide on this course, has any definite scheme been	Metre Gauge not concerned.	....	The present position as regards the adoption of the Automatic Centre Buffer Couplers is still under consideration and no definite scheme has yet been framed.

framed and if so, what will be your total requirements and your annual requirements for each of the next 5 years ?			
19. Please state whether, in your opinion all the necessary castings for Automatic Centre Buffer Couplers can be made out of materials available in India. If you do not consider this possible, please give your reasons.	No. For Automatic Centre Buffers which form the draw gear also, I am of opinion that the castings should be of steel produced by the acid process. This process of steel manufacture cannot be worked with Indian pig. The answer however would be in the affirmative providing all steel scrap charges were used in an acid lined furnace. But all first class scrap would be necessary and it is doubtful if sufficient supplies would be available in the market for a lengthy period. The specification for this type of fitting would naturally be strict and we are in ignorance of the exact process intended to be used by the Hukumchand Electric Steel Works Company.		We are not in a position to pass an opinion.
20. What has been the average annual amount of steel scrap which your Railway has placed on the market each year since 1921-22, and what has been the average price per ton realised f.o.r. works. How much of this scrap consisted of borings, turnings, shavings, etc., and what was the average selling price per ton f.o.r. works.	Unable to give this.		*Vide* Statement " B."

Questions.	Carriage and Wagon Superintendent's answers.	Loco. Superintendent Ajmer's answers.	Loco. and Carriage Superintendent Parel's answers.
21. Please state the location of your principal workshops and the railway freight per cwt. for the carriage of castings from Calcutta to the workshop. For imported castings, please state also the railway freight from the port of importation to the workshop.	Ajmer. Approximate freight *ex* Bombay (the port of importation) to Ajmer. Rs. A. P. Up to 270 maunds . 0 12 0 per cwt. Above 270 maunds . 0 9 0 ,,	....	Our principal workshops are located at Parel, Bombay.
22. In the event of the industry making out a case for the grant of protection, have you any views as to the form which this protection should take ?	I would suggest a bounty per ton for steel castings supplied against orders until the Industry is self-supporting.	....	The form which protection should take is immaterial to us.

A

Statement showing particulars of steel castings for Locomotives imported and manufactured in the Central Shops, Ajmer, during the five years, 1921-1926.

Description.	Total weight of rough turned castings imported from England.	Price per cwt. f.o.b. British Port.	Landing charges, freight, etc.	Total weight of castings manufactured in the Central Shop, Ajmer.	Average price per cwt.	Approx. annual requirements of castings for renewal purposes during next 5 yrs.	Approx. annual requirements of castings for new engines during next 5 yrs.	REMARKS.
	T. C. Q. lb.	£ s. d.	Rs. A. P.	T. C. Q. lb.	Rs. A. P.	T. C. Q. lb.	T. C. Q. lb.	
Boxes, axle: Loco Pattern No. 1*	..	..	..	30 5 0 8		19 3 3 20	57 11 3 4	
,, ,, ,, ,, ,, 2	..	..	..	..		4 1 3 24	..	
,, ,, ,, ,, ,, 3	..	..	..	0 15 0 12		3 2 3 2	..	
,, ,, ,, ,, ,, 4	..	..	..	0 12 1 26		5 4 0 2	..	
,, ,, ,, ,, ,, 5	..	..	..	..		2 13 2 8	..	
,, ,, ,, ,, ,, 6	..	..	..	..		7 7 3 12	..	
,, ,, ,, ,, ,, 7	..	..	..	1 3 6 4		5 11 2 12	..	
,, ,, ,, ,, ,, 8	..	..	..	..		6 17 2 0	..	
Bogie frame stretcher Loco. Pattern No. 9*	..	..	..	8 10 1 7	31 0 0	2 8 2 18	30 8 1 1	
,, center stretcher Loco. Pattern No. 10*	..	..	..	2 9 1 2		..	..	
,, side spring socket No. 11*	..	..	..	0 13 0 6½		0 17 1 18	1 1 3 1½	
,, ,, ,, washer No. 12*	..	..	..	0 0 0 17½		0 0 3 19	0 8 2 16½	
Frame stretcher above bogie No. 13*	..	..	..	5 10 0 0		..	..	
Drag-box casting above bogie No. 14*	..	..	..	20 7 2 23		..	43 16 3 4	
Frame stretcher front of fire box No. 16*	..	..	..	0 9 2 16		0 16 0 8	..	
,, ,, ,, lot L & D wheels No. 17*	..	..	..	2 10 0 25		0 11 0 18	6 19 2 1	
Motion plate frame stay No. 18	..	..	..	1 16 1 3		..	..	
Frame stretcher back of fire box No. 19	..	..	..	0 7 3 8		..	..	

Description.	Total weight of rough turned castings imported from England.	Price per cwt. f.o.b. British Port.	Landing charges, freight, etc.	Total weight of castings manufactured in the Central Shop, Ajmer.	Average price per cwt.	Approx. annual requirements of castings for renewal purposes during next 5 yrs.	Approx. annual requirements of castings for new engines during next 5 yrs.	Remarks.
..	T. C. Q. lb.	£ s. d.	Rs. A. P.	T. C. Q. lb.	Rs. A. P.	T. C. Q. lb.	T. C. Q. lb.	
Horn blocks Loco. Pattern No. 20*	..	..	..	28 18 0 13½		11 10 0 2½	28 15 0 6½	
„ „ „ „ „ 21*	..	..	..	..		11 18 2 19	41 5 1 10½	
Stays Horn blocks Loco. Pattern No. 22*	..	..	..	4 12 1 0		4 4 1 14	14 15 1 7	
Wedges Horn blocks Loco. Pattern No. 23*	..	..	..	5 0 3 21		5 13 3 10	19 18 1 21	
Horn blocks Loco. Pattern No. 24	..	..	..	1 5 1 5		1 5 3 16	..	
„ „ „ „ „ 25	..	..	..			1 6 1 10	..	
Wedges horn blocks Loco. Pattern No. 26	..	..	..	0 4 1 4		0 10 2 24	..	
Reversing shaft Loco. Pattern No. 30.	..	..	..	1 12 2 0		0 16 1 0	..	
Cross head Loco. Pattern No. 31.	..	..	..	0 9 2 8		0 5 3 26	..	
Motion plate No. 32	..	..	..	0 15 0 10		0 18 3 12½	..	
Anchor link bracket No. 33	..	..	..	0 7 0 0	31 0 0	0 2 2 0	..	
Reversing shaft bracket inter No. 34	..	..	..	..		..	..	
Frame stretcher below fire box No. 35	..	..	..	..		..	..	
Frame stretcher front of fire box No. 36	..	..	..	0 5 1 25½		..	..	
„ „ back of fire box No. 37	..	..	..	0 10 6 ¾		..	..	
Bracket expansion No. 38	..	..	..	0 4 3 20		0 2 0 6	..	
Cross head with cap No. 39*	..	..	..	..		3 7 3 12	..	
Wheel center bogie No. 40*	..	..	..	12 14 1 4		34 13 3 0	115 12 2 0	
Casting buffer No. 47*	..	..	..	0 8 3 0		0 14 1 4	..	
Casting bogie No. 51	..	..	..	0 19 3 14		1 13 0 14	..	
Wheel centers Loco. No. 52*	87 18 2 7	1 8 3	481 13 0	26 1 1 10½		..	291 15 3 21	

| | | |

Description.	Total weight of rough turned castings imported from England.	Price per cwt. f.o.b. British Port.	Landing charges, freight, etc.	Total weight of castings manufactured in the Central Shop, Ajmer.	Average price per cwt.	Approx. annual requirements of castings for renewal purposes during next 5 yrs.	Approx. annual requirements of castings for new engines during next 5 yrs.	Remarks.
	T. C. Q. lb.	£ s. d.	Rs. A. P.	T. C. Q. lb.	Rs. A. P.	T. C. Q. lb.	T. C. Q. lb.	
Bracket slide bar No. 137	..	..	..	..		..	..	
„ „ „ „ 138	..	..	..	..		..	..	
Horn blocks bogie No. 141	..	..	..	..		..	..	
„ „ „ „ 142	..	..	..	..		..	..	
Wheel centers No. 147*	28 7 0 8	1 18 4	369 5 0	..		..	..	
Brackets bogie brake hanger No. 149	..	..	..	0 4 0 10¾		0 9 1 20½	..	
Bracket horn for bogies Loco Pattern No. 151*	..	..	..	4 3 0 26		2 12 2 20	..	
„ „ „ „ „ „ „ 152*	..	..	..	3 15 3 12		2 11 3 4	..	
Wheel centers bogie No. 153	..	..	..	6 5 1 12		2 1 3 4	..	
Frame stretcher front of fire box No. 154	..	..	..	3 14 2 16		..	..	
Frame stretcher back of fire box No. 155	..	..	..	2 6 2 0	31 0 0	..	..	
Carrier for frame stretcher No. 158	..	..	..	1 0 1 0		0 11 1 0	..	
Bracket brake shaft carrier with cover No. 161.	..	..	..	0 9 1 20		0 8 2 8	..	
Bracket bogie compensating beam No. 162	..	..	..	..		..	..	
Cross head piston No. 163	..	..	..	..		..	..	
Caps piston cross head No. 164	..	..	..	..		..	..	
Frame stretcher front of cylinder No. 167*	..	..	..	17 8 2 0		11 12 2 0	..	
„ „ back of cylinder No. 168*	..	..	..	18 14 2 24		11 17 3 12	..	
Buffer guides No. 169*	..	..	..	1 18 0 14		1 11 1 0	1 18 7	
Bogie brake gear adjusting screw No. 170	..	..	..	0 12 3 21		0 16 0 8	..	
Frame stay back of fire box No. 171	..	..	..	..		..	..	

Foot plate support No. 176	..	..	..	..			..	..	
„ „ „ „ 177*	..	..	..	4 10 1 18			4 1 2 22	..	
Axle box No. 178	..	..	..	2 10 1 0			1 15 3 16	..	
Frame stretcher front of fire box No. 179	..	..	..	..			..	..	
Bogie frame stretcher No. 180	..	..	..	0 13 2 0			..	..	
Hercules bearing spring No. 181	..	..	..	0 19 3 2			..	..	
„ „ „ „ 182	..	..	..	0 0 2 15			..	..	
„ „ „ „ 183	..	..	..	1 1 1 20			..	..	
Support for bogie stop Loco. Pattern No. 184	..	..	..	3 7 1 16			0 7 3 12	7 17 0 16	
Bogie stop Loco. Pattern No. 185	..	..	..	3 7 2 8			0 7 3 12	7 17 0 16	
Bogie brake shaft bracket Loco. Pattern No. 186.	..	..	..	3 8 0 0	31 0 0		0 10 0 0	5 0 0 0	
Bogie brake shaft bracket Loco. Pattern No. 186A.	..	..	..				0 10 0 0	5 0 0 0	
Inter bracket No. 187	..	..	..	1 0 2 0			0 5 0 0	2 10 0 0	
Bogie center pivot No. 188	..	..	..	7 6 0 0			..	13 0 2 24	
„ „ casting No. 189	..	..	..	8 1 0 0			..	14 7 2 0	
Brackets compensating beam No. 190	..	..	..	5 11 0 0			0 10 0 0	10 0 0 0	
„ „ „ „ 191	..	..	..	2 15 0 14			0 11 1 0	..	
„ „ „ „ 197*	..	..	..	3 18 1 23			4 10 0 20	..	
„ „ „ „ 198*	..	..	..	4 12 2 10			4 15 2 4	..	
Brackets bogie bracing spring No. 199*	..	..	..	3 5 0 7			2 6 3 14	..	
Rubbing pale engines and tender cross rod No. 200.	..	..	..	8 4 2 21			4 16 3 14	9 13 3 0	
Frame stretcher bogie No. 201	..	..	..	13 19 0 0			1 2 2 0	..	
Brackets compensating beam No. 202	..	..	..	3 3 3 0			5 6 1 0	..	
„ „ „ „ 203	..	..	..	3 0 2 10			5 4 1 24	..	
Sealing top feed No. 208	..	..	..	1 9 0 2			..	3 12 2 5	

Description.	Total weight of rough turned castings imported from England.	Price per cwt. f. o. b. British Port.	Landing charges, freight, etc.	Total weight of castings manufactured in the Central Shop, Ajmer.	Average price per cwt.	Approx. annual requirements of castings for renewal purposes during next 5 years.	Approx. annual requirements of castings for new engines during next 5 years.	Remarks.
	T. C. Q. lb.	£ s. d.	Rs. A. P.	T. C. Q. lb.	Rs. A. P.	T. C. Q. lb.	T. C. Q. lb.	
Washers draw bar spring No. 209	..	..	..	..		0 16 3 24	..	
„ „ „ „ „ 210	..	..	..	..		1 1 1 20	..	
Blocks rubbing No. 211	..	..	..	11 0 1 7		15 12 2 0	..	
Frame stretcher front of fire box No. 212	..	..	..	7 18 2 23		..	22 0 3 11	
„ „ back of fire box No. 213	..	..	..	4 14 1 19		..	14 13 2 3	
Foot plate support front end and reversing screw carrier bkt. No. 214.	..	..	..	2 14 1 14		..	9 13 1 6	
Foot plate support back end bkt. Pattern No. 215.	..	..	..	2 6 2 12	31 0 0	..	6 9 1 24	
Bush piston valve No. 228	..	..	..	0 3 0 2		..	..	
Combined frame stretcher and bogie pivot No. 231.	..	..	..	20 5 0 0		..	56 5 0 0	
Bogie pivot No. 234	..	..	..	0 11 0 4		1 7 2 10	..	
Reversing shaft and quadrant link bkt. No. 235.	..	..	..	..		..	..	
Reversing shaft and quadrant link bkt. No. 236.	..	..	..	..		..	..	
Steam chest liners (large) bkt. No. 237*	..	..	..	0 7 2 18		15 19 0 22	..	
„ „ „ (small) bkt. No. 238*	..	..	..	0 6 1 8		13 3 1 16	26 6 3 4	
Bogie horn chek stay (small) bkt. No. 239	..	..	..	0 0 1 0		..	..	
Grand Total	123 19 0 7	..	..	375 1 3 24⅘		283 13 2 3	934 7 3 25½	

* Standard for more than one class.

Approx. weight of castings forming part of Locomotives.

		T. C.			T. C.
D, D1 and D2 Class	4 6 4 =	7 11	G2 Class	4 6 0 =	8 15
G „	4 6 0	7 11	M2 „	4 4 0	3 12
H and H1 „	4 4 4	6 12	P „	4 6 0	8 7

B

Statement of Steel Scrap sold with the average price realised each year from 1921-22 onwards.

Year.	Total amount of scrap sold.	Total value of scrap realised.	Approximate average rate per ton.	Place of delivery (site).
	Tons.	Rs. A. P.	Rs. A. P.	
1921	1,419	61,051 0 0	43 0 0	Mahalakshmi.
	819	35,622 0 0	43 7 0	Ajmer.
1922	1,292	50,049 0 0	38 0 0	Mahalakshmi.
	914	34,344 0 0	37 9 0	Ajmer.
1923	1,093	44,351 0 0	40 0 0	Mahalakshmi.
	1,133	29,749 0 0	26 4 0	Ajmer.
1924	2,109	77,010 0 0	36 0 0	Mahalakshmi.
	2,850	91,850 0 0	32 0 0	Ajmer.
1925	3,451	71,481 0 0	20 0 0	Mahalakshmi.
	1,349	41,708 0 0	30 14 0	Ajmer.

Statement of Scrap rails sold.

1921	130	9,630 0 0	74 0 0	Mahalakshmi.
	50	7,286 0 0	145 4 0	Ajmer.
1922	93	21,960 0 0	55 12 0	Mahalakshmi.
	212	16,362 0 0	77 0 0	Ajmer.
1923	311	13,172 0 0	42 5 0	Mahalakshmi.
	173	12,047 0 0	67 0 0	Ajmer.
1924	179	7,595 0 0	42 0 0	Mahalakshmi.
	737	56,829 0 0	77 0 0	Ajmer.
1925	363	12,500 0 0	34 6 0	Mahalakshmi.
	791	48,570 0 0	61 6 0	Ajmer.

4. BURMA RAILWAYS COMPANY, LIMITED.

Letter, dated the 12th July 1926.

I forward my replies (so far as I am able to furnish them) to the following questionnaires :—

* * * * * * *

(*c*) Steel Castings for locomotives, Railway carriages and wagons (received with your letter No. 226, dated the 10th May 1926).

* * * * * * *

2. Where views are expressed they are not necessarily those of my Home Board.

3. A copy goes to the Railway Board.

Replies to Tariff Board's letter No. 226, dated the 10th May 1926.

III. STEEL CASTINGS FOR LOCOMOTIVES, RAILWAY CARRIAGES AND WAGONS.

1. There are very few steel castings used on the Burma Railways as we have studied to use material we can make in our own workshop as required for maintenance. The list given includes all the castings on our rolling stock. The steel castings supplied with locomotives rarely require replacing. Steel axle boxes have been replaced by bronze ones as economically as well as mechanically better.

2. It is naturally the studied effort to reduce to standards suiting as many types of locomotives, carriages and wagons. For example C. & W. steel axle boxes fit all types.

3. Some castings take peculiar skill and experience; for example, steel centres of locomotive wheels. These presented enormous difficulty in getting rid of internal cooling stresses. When first made in the United Kingdom several fatal accidents occurred and the workmen refused to handle them for they actually burst in process of fettling. They require to be annealed with the utmost care. The same applies to any intricate steel casting with varying thickness of metal. At all times the analysis of steel castings must be correct for the work intended. If in paragraph 1 " out of scrap steel " means without proper analysis it is not a safe way to manufacture railway material. If however it only means utilising scrap steel in the ordinary way and analysing the casts it is usual practice.

4. The quantities are negligible and do not exceed 2 tons in any year. All was imported except 2½ tons being special steel frame castings for Mallet engines supplied by the Bombay, Baroda and Central India Railway in 1921 and 1923. We cannot manufacture steel castings in our own shops.

5. The figures cannot be given as the castings were not in the rough.

We got in 1926, 29 cwts. 14 lbs. steam hammer blocks in the rough from the Hukumchand Electric Works Company, at Rs. 38·8 per cwt. f.o.b. Calcutta, costing Rs. 1,121·5 *plus* shipping charges Rs. 57·3 f.o.b. Rangoon.

These have only been put into service and cannot yet be reported.

6. The Consulting Engineers Department make all arrangements for imported materials. The almost entire immunity from failures indicates how thoroughly this is done. If work were done in India the inspection as arranged for by the Railway Board would have to be adopted.

7 and 8. No steel castings made.

9. Only cast iron boxes made.

10. The steel frames made by the Bombay, Baroda and Central India Railway for the Mallet engines have exceedingly exacting duty and are so far quite satisfactory.

11. No engine has so far been re-built and there is no such work in view. Engines are not built. There are practically no steel castings in our carriages and wagons. Steel axle boxes are coming into vogue, also steel buffer heads, but total per vehicle would only be about 6 cwts.

12. (*a*) 1. *Nil.*

2. Approximately 50 tons.

(*b*) Not made here.

13, 14 and 15. *Nil.*

16. No, and does not intend doing so. C. I. boxes put into service in the year 1880 are still in good order.

17. Steel boxes have just gone into service within recent years. The wear appears heavier in steel than C. I. both as regards the boxes and the guides. For locomotives steel boxes have proved very unsatisfactory compared with bronze.

18 and 19. Metre gauge not concerned.

20. Steel scrap has been unsaleable for years and accumulating. Have just arranged to sell some at Rs. 12 per ton to sink in a river bund. We accumulate over 100 tons a year, chiefly tyres.

21. Shops are at Insein and Myitnge, 9 and 377 miles from Rangoon which is over 700 miles from Calcutta. Railway freight is 2 annas ton mile. The actual freight charges from Calcutta to Rangoon on the 29 cwts. steel castings referred to above in paragraph 5 were 57·3 excluding landing charges at Rangoon.

22. No.

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5. EASTERN BENGAL RAILWAY.

(*1*) *Letter, dated the 21st June 1926.*

With reference to your letter No. 226, dated 10th May 1926, I enclose herewith a statement containing the information required by the Tariff Board concerning steel castings for locomotives, railway carriages and wagons.

III.—Steel castings for locomotives, railway carriages and wagons.

1. The list of articles under (*a*) and (*b*) comprises all the principal steel castings required for locomotives, carriage and wagons except carriage and wagon buffer sockets which should be added.

2. The Policy of the Railway Board is to standardise in the immediate future certain types of locomotives, carriages and wagons for all Railways in India and when this is accomplished, all parts of any one type will be interchangeable and, as far as possible, standard parts will be used for different types. Certain of the castings mentioned have been standardised but are liable to revision during the next two or three years.

3. This Railway is not in a position to give a definite opinion in this case.

4. (*a*) The following is a list of approximate total weights of castings obtained as components of new rolling stock annually from 1921-22 onwards:—

	B. G. Tons.	M. G. Tons.	Total. Tons.	
1921-22 . . .	30	—	30	As per details in separate list enclosed as Annexure 'A.'
1922-23 . . .	141	32	173	
1923-24 . . .	28	—	28	
1924-25 . . .	10	—	10	
1925-26 . . .	164	17	181	

(*b*) As detailed in separate lists enclosed as Annexures B, C and D.

(*c*) *Nil.*

5. With regard to the steel castings falling under heading (*a*) this railway is unable to give the information required in detail as all the castings were obtained as components of the complete engines, carriages and wagons; as regards the steel castings falling under heading (*b*) rates have been noted on Annexures B, C and D against each item as far as available.

6. (*a*) Arrangements are made by the Consulting Engineers to the India Office for Inspectors to test and pass material in the country of origin as far as possible.

(*b*) When the country of origin is distant from the Consulting Engineers jurisdiction, for example, America, etc., inspection and test are made in India at the request of Director General of Stores, London, and in such cases 10 per cent. of supplier's bill is withheld till such time as the consignment have arrived in India and been inspected and found satisfactory.

7. Steel castings are not manufactured in the Eastern Bengal Railway Workshops.

8. *Nil.*

9. Axle boxes are not manufactured in the Eastern Bengal Railway Workshops.

10. (1) Messrs. Hukumchand Electric Steel Works Co., Ballygunge, Calcutta.

(2) The Bombay, Baroda and Central India Railway, Ajmere.

The experience of this railway is that these castings are not as good as English castings, the metal is inclined to be porous, the finish is rough and machining tolerances are heavy.

11. Please see replies to questions 4 and 5.

12. (*a*) (1) For reply please see Annexure E.

12. (*a*) (2) For reply please see Annexure F.

12. (*b*) Steel castings are not manufactured by this railway.

13. Quantities are shown in Annexure D.

None of our requirements have been met from our Workshop.

14. Please refer to Annexure D.

15. 70 cwts. per year.

16. Cast iron steel boxes are gradually being replaced by steel boxes, but no programme is laid down.

17. A well designed steel box subject to ordinary wear and tear should last the life time of the Engine or Vehicle under which it is running. A cast iron box will last about 4 to 5 years but is very readily broken by rough shunting or in accidents.

18. The matter is being considered by the Railway Board and the present position is not known to this administration. There are altogether 9,810 units of rolling stock on this railway including engines on the line. If the Railway Board decide to adopt central couplers, this railway will, therefore, require 19,620 altogether. The annual requirements during conversion will depend entirely on the policy adopted by the Railway Board.

19. This question may be referred to the Railway Board.

20. The average annual quantity of steel scrap excluding borings, turnings, shavings, etc., sold by auction between 1921 and 1925 and the average price per ton realized therefrom are shown in Annexure G.

The last part of the question is under enquiry.

21. The location of the principal workshops are at Kanchrapara and Saidpur. Freights at railway material rate from Ballygunge and Ishapur works to Kanchrapara and Saidpur are shewn in Annexure H.

22. This administration is not in favour of protection, but if it has to be given, it is suggested that loans on easy terms as presenting the least objectionable features be allowed.

ANNEXURE "A."

Total weights of castings obtained as components of new rolling stock annually from 1921-22 onwards.

Years.	Engines.	Coaches.	Wagons.	Total.
	Tons.	Tons.	Tons.	Tons.
Broad Gauge.				
1921-22	18	12	...	30
1922-23	50	11	80	141
1923-24	19	...	9	28
1924-25	10	...	...	10
1925-26	144	...	20	164
TOTAL	241	23	109	373
Metre Gauge.				
1921-22	...	...	...	...
1922-23	...	...	32	32
1923-24	...	...	...	...
1924-25	...	...	...	...
1925-26	17	...	...	17
TOTAL	17	...	32	49

ANNEXURE "B."

Purchased from the Hukumchand Electric Steel Works.

Description of Stores.	1921, 1922 and 1923.	1924.	1925.
Cast Steel Head stock Bracket of sizes .	Nil.	...	1,000--Rs. 38 each.
Block Cast Steel special for Lock Bars 90 lbs. and 75 lbs. F. B. Rails of sizes.	„	20--Rs. 56 cwt.	55— „ 56 cwt.
Cast Steel Cruciform special Pump Block.	„	Nil.	16— „ 45 „
Cast Steel Check Block of sizes . .	„	20—Rs. 56 „	91— „ 56 „
Brackets Cast Steel for Bogie Centre .	„	24— „ 45 „	200— „ 45 „
Crank Escapement (Cast Steel rough) .	„	50— „ 56 „	44— „ 56 „
Half Crank (Cast Steel rough) . .	„	50— „ 56 „	44— „ 56 „
Cast Steel Horn Stays . . .	„	Nil.	6— „ 42 „
Axle Box Cast Steel 7″ × 3½″ Journals .	„	„	100— „ 25 each.
Axle Box Cast Steel machined but without Brasses 10″ × 4¼″ × 7½″ with 1″ Groove.	„	„	50— „ 32 per box.
Cast Steel Dies with the impression 3′— 3″ × 18″ × 14″ to pattern.	„	1—Rs. 36 cwt.	Nil.
Dove Tail Rough Cast in the block .	„	1— „ 36 „	„
Dies Cast Steel as per pattern . .	„	2— „ 54 „ prs.	„
Cast Steel Lock for Check Block 90 lbs. F. F. of sizes.	„	140— „ 45 „	„
Cast Steel Casting Point Adjusting Screws 1¼″.	„	300— „ 4 each	„
Cast Steel Pawl Wheels for overhead Travelling Crane.	„	2— „ 40 cwt.	„
Cast Steel Casting as per Brass pattern Nos. A. B. C. weight 1 qr. 4 lbs.	„	3— „ 56 „	„
Cast Steel Rough Covers for Manhole .	„	6— „ 40 „	„
Axle Boxes Casting unmachined without fittings or bearings.	„	250— „ 26 each	„

ANNEXURE "C."

Purchased from the Gund and Shell Factory.

1922.

Piston Forging (Rough) C. and S. per Loco's Drawing No. 10337 . .	1 —	Rs. 1,100.
Cast Steel Die Blocks 16" × 6¾" × 5½"	24 —	„ 975-6-4 for the lot.
11" × 6¾" × 5½"	24 —	„ 702-2-9 do.

Cast Steel Die Blocks for Drop Hammers:—

	Pairs.	
20" × 10" × 10"	2	Rs. 30 cwt.
16" × 16" × 10"	2	
21" × 9" × 10"	3	
14" × 14" × 10"	2	
16" × 12" × 10"	3	
14" × 8" × 10"	3	
12" × 12" × 10"	3	
12" × 9" × 10"	6	
10" × 8" × 10"	6	
16" × 10" × 10"	3	

1924.

Axle Rough forged 10" × 5" as per specification and Drawing No. 10906	No. 100 —	Rs. 165 each.

1925.

	No.	
Axle D. & J. Class Engine Bogie .	4 —	Rs. 190 each F. C. R. Ishapore.
Axle D. & G. Class Engine Tender .	12 —	„ 215 „ do.

ANNEXURE "D."

Steel castings used for General Engineering purposes for the years 1923-24 to 1925-26.

Description of Material.	1923-24.		1924-25.		1925-26.	
	Quantity.	Rate per Cwt.	Quantity.	Rate per Cwt.	Quantity.	Rate per Cwt.
	Cwt.	Rs.	Cwt.	Rs.	Cwt.	Rs.
Crank Escapament .	20 0 0	52 12 0	11 0 16	53 10 0	7 2 14	46 0 0
Cast Steel Dies . .	3 0 0	52 12 0	...	...	...	...
Cast Steel Lock Bar .	...	...	20 0 20	53 10 0	3 3 0	46 0 0
Point Adj. Screw 1¼" .	...	....	13 1 16	53 10 0	...	...
Cast Steel Half Crank .	...	...	5 1 4	53 10 0	4 1 14	46 0 0
C. S. Check Block . .	...	...	...	53 10 0	2 2 0	46 0 0
C. S. Cruciform Ram Blocks.	...	...	...	...	25 2 0	46 0 0
C. S. Blocks . .	...	...	...	...	30 1 0	19 0 0

ANNEXURE "E."

Estimated Annual requirements of steel castings for repairs and renewals of Locomotives and wagons and carriages for 1927-28 to 1931-32.

LOCOMOTIVES.

	Broad Gauge.					*Metre Gauge.*				
Axle Boxes .	12	Approx.	weight	18·5	Cwts.	12	Approx.	weight	10·3	Cwts.
Buffers .	40	,,	,,	81	,,	12	,,	,,	26	,,
Horn Blocks	12	,,	,,	29	,,	12	,,	,,	11·25	,,

CARRIAGES AND WAGONS.

Axle Boxes .	1,000	Approx.	weight	893	Cwts.	1,000	Approx.	weight	500	Cwts.
Buffers . .	1,600	,,	,,	3,200	,,	700	,,	,,	1,050	,,
Bogie centres.	*Nil*	,,	,,	...		150	,,	,,	115·2	,,
Brackets .	*Nil*	,,	,,	...		920	,,	,,	820	,,

ANNEXURE "F."

Estimated requirements of steel castings as parts of locomotives, wagons and carriages imported and re-erected or built in India.

Year.	Loco-motives (complete).	Boilers.	Carriage under-frames.	Wagons.	Total.
	Tons.	Tons.	Tons.	Tons.	Tons.
Broad Gauge.					
1927-28 . . .	43·5	·225	20·4	13·5	77·265
1928-29	68·75	...	19·30	27·00	115·05
1929-30	27·5	...	8·52	1·00	37·02
1930-31	41·25	...	7·78	5·85	54·88
1931-32	...	...	7·04	...	7·04
	181·00	·225	62·68	47·35	291·255
Metre Gauge.					
1927-28	...	·903	...	58·8	59·703
1928-29	...	...	13·07	42·3	55·37
1929-30	...	...	16·35	68·7	85·05
1930-31	...	...	19·82	55·0	74·82
1931-32	...	...	15·22	6·8	22·02
	...	·903	64·46	231·60	296·963

ANNEXURE "G."

Quantity and price of steel scrap (other than borings, turnings, shavings, etc.) placed on the market from 1921-22 to 1925-26.

	Quantity of steel scrap sold.	Average rate per ton.
1921 . . .	1,984 tons.	Rs. 103 per ton.
1922 . . .	1,108 „	„ 51 do.
1923 . . .	1,234 „	„ 44 do.
1924 . . .	1,511 „	„ 42 do.
1925 . . .	1,078 „	„ 44 do.

ANNEXURE "H."

Statement showing freight at Railway Material rate from Ballygunge and Ishapore works to Kanchrapara and Saidpur.

Ballygunge to Kanchrapara at Railway material rate .		0	0	3	per maund.
,, to Saidpur	do.	0	2	2	do.
Ishapore to Kanchrapara	do.	0	0	1	do.
,, to Saidpur	do.	0	2	1	do.

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(2) *Letter from the Eastern Bengal Railway, dated the 26th July 1926.*

Reference:—This office letter No. $\frac{4311\ B.-W.}{30-2-26}$, dated the 21st June 1926.

Subject:—Questions concerning steel castings for Locomotives, Railway Carriages and Wagons.

In continuation of the above quoted letter and with reference to the remark made against question 20 of the questionnaire, I have to inform you that this Railway has never hitherto succeeded in selling the steel borings, turnings and shavings.

2. It has, however, started briquetting them into sizes 18″×5″ with the idea of selling them eventually, but it is not very hopeful of being able to do so.

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6. EAST INDIAN RAILWAY.

Letter dated the 17th July 1926.

With reference to your letter No. 226, dated 10th May 1926, I beg to forward herewith replies to the questionnaire relating to steel castings mentioned above.

Replies to questionnaires regarding steel castings for locomotives, railway carriages and wagons.

1. The principal steel castings required for locomotives, carriages and wagons are:—

For locomotives.

Piston valve heads, platform brackets, frame stretchers, spectacle frames, axle-boxes, horn blocks, horn stays, drag boxes, wheel centres, firebox roof bars, foundation and firehole rings, bissel wheel trucks, centre pivots and carrier, pivot bearings and vaccum brake cylinder centre carrier.

For carriages and wagons.

Bogie coaching stock.	*Goods stock (Bogie).*
Bolster spring bearing top.	Top side bearers bracket.
Bolster hanger bracket.	Top centre casting.
Bolster side wearing blocks.	Bottom centre casting seating.
Bolster end spring cups.	Bottom centre casting brackets.
Truss rod brackets.	Bottom centre casting.
Side bearers top.	Bottom side bearers.
Side bearers bottom.	Axle-boxes.
Axle-boxes.	Bearing spring brackets.
	Bearing spring hangers.

(*a*) Yes.

(*b*) These classes are all included in the list of castings which the Hukumchand Electric Steel Works Company claim to be in a position to manufacture.

2. Yes, standardized to suit more than one class of engine or tender.

The question of standardization of carriage and wagon fittings is now in the hands of a Committee.

3. Unable to say.

4. The total weight in cwts. of the principal classes of steel castings used in the Railway works each year from 1921-22 onwards is as follows:—

(*a*)

	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
Axle-boxexs	1,922	2,560	2,384	2,041	2,931

(*b*)

Between 1921-22 and 1925-26.

Axle-boxes 6,273

(*c*)

	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
For Carriages and wagons—					
Bearer side—					
Top roller and roller keeper Fig. E. 7.	...	...	...	9	6
Bottoms Fig. B. 1. . . .	...	...	...	18	5
Bogie bolster Fig. F. 9. . . .	...	...	6	34	31
Top bolster Fig. L. 1. . . .	...	...	91	66	...
For Locomotives—	2,720	3,980	3,020	2,440	*3,140

5. *For carriages and wagons.*

The price paid per cwt. for each of the steel castings falling under heading 4 (*a*) for each year from 1921-22 onwards was as follows:—

Axle-boxes from 1921-22 to 1923-24—Rs. 38-11-0.

Axle-boxes from 1924-25 and 1925-26—Rs. 33-8-0 and Rs. 30-5-0 respectively.

For Locomotives—Rs. 25 each (average).

Similarly for 4 (*b*).

For carriages and wagons—

Axle-boxes for the year 1925-26—Rs. 40-6-0.

For Locomotives—Rs. 36 per cwt.

N.B. 1.—Not ascertainable.

2.—Cost, freight and 3 per cent. departmental expenditure for each axle-box is £1-7-5*d.*

6. Unable to say.

7. (1) Pig iron . . . . . Rs. 53 per ton.

Hæmatite . . . . . Rs. 90 per ton.

Steel scrap No. 10 . . . . . Rs. 35 per ton.

Steel scrap No. 7 . . . . . Rs. 15 per ton.

Steel scrap No. 4 . . . . . Rs. 25 per ton.

Ferro Manganese . . . . . Rs. 35 per cwt.

Iron Ore . . . . . Rs. 7-8 per ton.

Ferro Silicon . . . . . Rs. 10-4 per cwt.

(2) Molten metal . . . . . Rs. 4-14-2 per cwt.

Power . . . . . Rs. 2-14-2

Fuel included in molten metal Labour . Rs. 4-3-2

Repairs to furnace included in molten metal.

Supervision not charged to cost of manufacture.

Miscellaneous stores . . . . . Rs. 8-0-6

Rs. 20-0-0

8. About 8 per cent.

9. Does not arise as the carriage and wagon axle-boxes are not manufactured in the workshops.

10. Yes, we have used steel castings manufactured by the Hukumchand Electric Steel Works Company, *viz.*, Axle-boxes. The quality has been quite good but the finish and workmanship is not up to those imported from England.

11. Not ascertainable.

12. (*a*) *For carriages and wagons*—

(1) The annual requirements during the next five years of steel castings will be approximately about 150 tons for repairs.

(2) About 45 tons annually required for carriages imported and re-erected in India.

For Locomotives—

(1) For locomotives 160 tons annually.

(2) *Nil*—for locomotives.

(*b*) Full extent for locomotive and tender requirements.

13 and 14.

Used in Jamalpur.

	Tons.
1921-22	18
1922-23	43
1923-24	33
1924-25	47
1925-26	79

All were manufactured in the Jamalpur Workshop except one large pinion supplied by Hukumchand Steel Works, Calcutta, at Rs. 36 per cwt. f.o.r. Howrah, and one large air compressor pinion from Messrs. John Fowler and Company, Leeds, at Rs. 860 delivered in India.

15. 300 tons approximately.

16. Yes. Our annual requirements of steel axle-boxes will be approximately 2,500 cwts.

17. There is no comparison. Cast steel stands up to rough shunting far better than cast iron.

18. We have some 50 to 60 wagons fitted with automatic central buffer couplers standing in these workshops awaiting the official trials next week. No definite scheme has been framed as regards our future requirements, should the central automatic coupler be adopted.

19. Unless the composition of the steel is given, it is not possible to give a definite reply.

20. The average annual output of steel scrap which Lillooah workshop has sent to the General Stores, Howrah, for sale on the market each year since 1921-22 has been about 85 tons. Of this about 55 tons scrap axle-boxes were sold at Rs. 20 per ton. The remaining 30 tons were borings, etc. The selling price of this latter material is also about Rs. 20 per ton.

The quantity sold by auction at Jamalpur except turnings, borings and shavings is as follows:—

1920-21	50 tons.
1921-22	7 cwts.
1922-23	507 tons.
1923-24	2,490 tons.
1924-25	5,580 tons.
1925-26	3,430 tons.

Prices varied from Rs. 403 to Rs. 10 per ton.

21. These works are located at Lillooah, Jamalpur and Lucknow.

The Railway revenue freight for the carriage of castings from—

Howrah to Lillooah, a distance of three miles—2 annas 2 pies per ton.

Howrah to Jamalpur, a distance of 290 miles—Rs. 3-11-0 per ton.

Howrah to Lucknow, a distance of 616 miles—Rs. 7-12-9 per ton.

22. No.

7. GREAT INDIAN PENINSULA RAILWAY.

(1) *Letter, dated the 16th July 1926.*

I beg to forward six copies of the answers of this Administration to the questionnaire relating to the purchase of steel-castings for locomotives, railway carriages and wagons.

Answers to questionnaire issued by the Tariff Board with their letter No. 226, dated the 10th May 1926.

STEEL-CASTINGS FOR LOCOMOTIVES.

Railway Carriages and Wagons.

1. A list of the principal steel-castings required for locomotives, carriages and wagons is attached. The reply to the latter part of question No. 1 is in the affirmative.

2. Yes.

3. Indian manufacturers are only able to supply basic open-hearth steel and, although the British Standard Specifications permit of its use, we consider that the Consulting Engineers have adopted a wise course in specifying acid open-hearth steel for axles, tyres, springs and boiler plates, as by so doing the chances of the phosphorous contents exceeding the maximum specified is very considerably reduced. In our opinion we should be taking unnecessary risks, if we accepted axles, tyres and boiler-plates made from basic hearth steel, and we cannot recommend its adoption.

4. The following are the figures:—

(*a*) Locomotives, carriages and wagons—

	Tons.
1921-22	956½
1922-23	10
1923-24	1,015
1924-25	5
1925-26	10

(*b*)

	Tons.
1921-22	*Nil.*
1922-23	*Nil.*
1923-24	5
1924-25	10
1925-26	13½

(*c*)

	Tons.
1921-22	33
1922-23	42½
1923-24	*Nil.*
1924-25	*Nil.*
1925-26	*Nil.*

5. The following is the price per cwt. c.i.f. (Bombay) sterling for (*a*) and f.o.r. (Calcutta) in rupees for (*b*).

	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
(*a*)	£ 2 3 0	£ 3 0 0	£ 2 18 0	£ 2 13 0	Not available.
(*b*)	*Nil.*	*Nil*	Rs. 38	Rs. 38	Rs. 38.

The prices quoted against (*a*) are all based on the round average, the price varying with the several types of castings—all the castings were obtained from Great Britain.

6. (*a*) and (*b*) Imported castings (including those from the Continent) are not tested in India as they are passed by the Consulting Engineers prior to despatch.

7, 8, and 9. We do not manufacture steel-castings in our workshops.

10. We have received supplies of steel-castings manufactured in India from the Bombay, Baroda and Central India Railway, Ajmere, and from the Hukumchand Electric Steel Works, Calcutta. The steel-castings from the latter have been satisfactory and all our recent supplies have been from that source.

11. The information is not available.

12. (*a*) This is being estimated and figures will follow.

(*b*) We do not propose to meet these requirements from our own workshops.

13.

	Tons. cwt. qrs. lbs.
1921-22	Not available.
1922-23	9 ... ...
1923-24	1 ... ...
1924-25	44 ... ...

We have not manufactured any steel-castings in our own workshops.

14.

	Price for cwt. Rs. A. P.
1921-22	Not available
1922-23	40 8 0
1923-24	45 0 0
1924-25	38 0 0

All steel-castings for general engineering purposes were obtained in India.

15. It is not possible to forecast our requirements of steel-castings for general engineering purposes for the next five years, but it is anticipated that very few, if any, will be required.

16 and 17. It is not intended to substitute the cast-iron axle-boxes by steel axle-boxes on this Railway.

18. This should be referred to the Railway Board.

19. Yes.

20. The average quantity of steel scrap which this Railway has placed on the market each year since 1921-22 and the average price per ton realised is as under:—

	Total quantity sold.	Total amount realised.	Average rate per ton.
	Tons.	Rs.	Rs. A. P.
1921-22 . . .	...	Not available.	...
1922-23	1,406	64,032	45 8 0
1923-24	1,140	52,138	45 12 0
1924-25	1,241	48,655	39 3 0
1925-26	6,030	1,47,460	24 7 0

Of this scrap, 7·8 per cent. consisted of cuttings, turnings, etc., for which the average selling price was Rs. 5 per ton.

21. Our principal workshops are situated at Parel and Matunga, near Bombay and at Jhansi, United Provinces.

The rates of freight charged for the carriage of castings from Calcutta to our workshops at Parel and Matunga near Bombay and at Jhansi are as under:—

		Rs.	A.	P.	
From Calcutta to	Parel and Matunga .	1	0	2	per maund.
"	Jhansi	0	10	8	per maund.

and that for imported castings:—

		Rs.	A.	P.	
From Bombay to	Parel and Matunga .	0	1	4	per maund.
	Jhansi	0	4	4	per maund.

22. This should be referred to the Railway Board.

Enclosure.

A list of the principal steel-castings required for locomotives, carriages and wagons on the Great Indian Peninsula Railway.

	Whether standard or not.
Wheel centres	Not.
Frame stretchers	Not.
Drag boxes	Not.
Horn blocks	Not.
Axle-boxes	Not.
Axle-box stays	Not.
Cross Heads	Not.
Piston Heads	Not.
Motion brackets	Not.

	Whether standard or not.
Body end brackets	Yes.
Side truss bar brackets	Yes.
Brake column	Yes.
Hand brake wheel	Yes.
Wearing bracket for swinglink	Yes.
Brake block hanger brackets	Not.
Friction plate brackets	Not.
Bolster spring brackets	Not.
Side friction blocks	Not.
Swing beam saddle	Not.
Horn cheeks	Not.
Centre Pivot, top and bottom	Not.
Bearing spring bracket	Not.
Wheel centres	Yes.
Sole bar stiffening bracket	Not.
Axle-boxes	Not.
Bearing spring hanger	Not.
Queen post sole bar and longitudinal	Not.
Bolster spring bearing brackets	Not.
Bolster hanger guide bracket	Not.
Bolster side wearing block	Not.
Top side bearer brackets	Not.
Top centre casting	Not.
Bottom centre casting seatings	Not.
Top centre casting brackets	Not.
Top, bottom and side bearers	Not.
Tank top bracket	Not.
Axle-box key plate I. R. C. A.	Not.
Lever arm bracket (Door Controller)	Yes.
Spring sleeve and swivel	Yes.
Axle-box face plate I. R. C. A.	Not.
Bogie pillar casting	Not.
Bogie bolster guide	Not.
Truss Rod support	Not.
Buffer and draw gear spring bracket	Not.
Centre castings	Not.
Axle guards horn cheeks	Not.
Spring shoe	Not.
Bolster spring castings	Yes.
Side friction block	Yes.
Axle-box guide R. and L. (Horn Cheeks)	Yes.
Brake hanger bracket	Not.
Swing link bracket	Yes.
Follower casting guide	Not.
Buffing stop	Not.
Seat bracket casting	Not.
Draw plate casting	Not.
Striking casting	Not.

	Whether standard or not.
Spring roker plate	Not.
Side bumper cone	Not.
Rivet pinion	Not.
Rivet wheel	Not.
Sloping lever bracket	Not.
Axle-box slipper I. R. C. A.	Not.
Axle guard R. & L.	Not.
Trousem centre casting	Not.
Pivot seating casting	Not.
Suspension link bracket	Not.
Motor nose brackets	Not.
Top side bearer	Not.
Bottom side bearer	Not.
Bolster rubber blocks	Not.
Brake head with lug: R. & L.	Not.
Brake head without lug	Not.
Brake beam guide bottom	Not.

Letter from the Great Indian Peninsula Railway, dated the 16th August 1926.

In continuation of this office letter No. 11474-E.-260, dated 16th July 1926, I beg to give below the information promised:—

Answer No. 12 (a).—(1) 15 to 20 tons annually.

(2) 1,680 tons annually.

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8. THE MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

Letter, dated the 19th June 1926.

Referring to your questionnaire relating to the purchase by this railway of steel castings for locomotives, railway carriages and wagons, I have the honour to reply as follows:—

1. The following is a list of principal steel castings required for locomotives, carriages and wagons. The list given by the Hukumchand Electric Steel Works Company covers practically all these items.

1. (*a*) *Locomotives.*—The following are the steel castings received with the locomotives:—

Fire door.
Smoke box saddle.
Frame stretchers.
Drag casting.
Bogie casting (centre).
Piston head.
Piston valve head.
Reversing rod guide.
Motion girders.

Slide bar bracket.
Reversing link carrier.
Wheel centres.
Axle boxes.
Horn blocks.
Compensating beam carrier.
Spring link bracket.
Platform support.
Brake shaft carrier.
Bogies frame stay.
Tender drag casting.
Tender wheel centres.

1. (*b*) *Carriage and wagon.*—Particulars of steel castings ordered on Home Indents for underframes:—

Truss rod brackets.
Bogie centre top casting.
Bogie centre bottom casting.
Side friction block (top) R. & L.
Side friction block (bottom) R. & L.
Upper spring shoe.
Lower spring shoe.
Brocker bar carrier.
Bolster side check spring saucer.
Axle box body.
Axle box key plate.
Axle box face plate.
Queen post.
Auxiliary bearing spring box.

2. Yes, axle boxes, buffers, motion plates, piston valve heads, horn blocks.

3. I am unable to say but can only state that when we have placed orders for steel castings in India we have had considerable difficulty in getting the material, promised delivery dates are not kept, orders being complied with months after promised dates if at all. The quality of the castings has not been up to the standard of imported castings.

4. The total weight of steel castings used each year from 1921-22 is as follows:—

Broad Gauge.

(*a*) Imported from England and used during the year.

1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Tons.	Tons.	Tons.	Tons.	Tons.	Ton.
2	5½	6½	84½	7	1

Imported from France and used during the year.

1926-27.
Tons.
1½

(*b*) Manufactured in India.

1925-26.	1926-27
Tons.	Tons.
4	6

(*c*) Manufactured in Railway Shops.

Nil.

Metre Gauge.

(*a*) Imported from England and used during the year.

1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
14	35	31	19	28	*Nil.*

Imported from Germany and used during the year.

1922-23.
Tons.
3½

Imported from France and used during the year.

1925-26.
Ton.
.1

(*b*) Manufactured in India.

Nil.

(*c*) Manufactured in Railway Shops.

Nil.

5. Prices paid per cwt. are as follows (B. G. and M. G.):—

(*a*) Imported from England.

1921-22.	1922-23.	1923-24.	1924-25	1925-26.
Approx. £3 per cwt. f.o.b.	Approx. £4 per cwt. f.o.b.	Approx. £2-10-0 per cwt. f.o.b.	Approx. £3-10-0 per cwt. f.o.b.	Approx. £2-10-0 per cwt. f.o.b.

Imported from France.
1925-26.
Approx. £3-10-0 per cwt. f.o.b.

Imported from Germany.
1922-23.
Approx. £2-10-0 per cwt. f.o.b.

Freight charges work out to approximately £2-5-0 per ton and landing charges are Rs. 5 per ton.

(*b*) Manufactured in India.

1923-24.	1925-26.	1926-27.
Approx. Rs. 35 per cwt.	Approx. Rs. 38 per cwt.	Approx. Rs. 36 per cwt.

6. Castings imported from Europe are dealt with entirely by the Home Board through their Consulting engineers and no additional tests are carried out in India. Those manufactured in India are tested at the Government Test House, Calcutta.

7. No castings are manufactured.

8. *Nil.*

9. No cast steel axle boxes made.

10. Kirtyanand Steel Foundry, Hukumchand Steel Foundry. Castings not such good quality as imported, deliveries most unsatisfactory.

11. Regret we cannot give this as figures are not available.

12. (*a*) (1) and (2). Cannot estimate this.

(*b*) *Nil.*

13, 14 and 15. No steel castings are used for General Engineering purposes.

16. No.

17. Reliable figures are not available, cast steel boxes may be taken to have four times the life of cast iron boxes.

18. Central couplers cannot be adopted by a single railway; if it is ever done, the type will be made standard for all railways by the Government of India.

19. From our experience of delay and trouble with small orders, it is considered that extensive changes would be necessary before large orders can be dealt with.

20. Steel scrap is usually sold annually and the quantities including springs flat, volute and spiral tyres C. and W. and engine tyres amounted to the following, average prices were offered for the same:—

	Tons.	Average price per ton offered.
		Rs.
August 1921	925	60
September 1922	715	34
October 1923	877	30
October 1924	823	24
September 1925	578	19
February 1926	221	13

Taking the sale of steel castings only, the following figures are obtained:—

	Tons.	Average price offered per ton.
		Rs.
August 1921	65	52
September 1922	85	35
October 1923	262	14
October 1924	45	10
September 1925	205	14
February 1926	57	12

None of the above scrap consisted of borings, turnings, etc., which are utilized by the workshops for their own requirements.

21. The principal workshops are at Perambur, Hubli, and Arkonam, and the railway freight per cwt. for the carriage of castings from Calcutta is Re. 1 per cwt.

Imported castings for B. G. are usually shipped to Madras Harbour and the freight per cwt. from Madras Harbour to Perambur Works is one pie per cwt.

Imported castings for M. G. are usually shipped to Mormugao Harbour and the freight per cwt. from there to Hubli is one anna six pies per cwt.

22. I am of opinion that there should be no duty on imported steel castings, if protection is essential it should take the form of a subsidy or bounty.

9. NORTH WESTERN RAILWAY.

Letter, dated the $\frac{26th}{29th}$ *July 1926.*

With reference to your letter No. 226, dated 10th of May 1926, I send herewith in duplicate answers to the questionnaire regarding steel castings for locomotives, railway carriages and wagons.

Answer 1.—The list, furnished by Messrs. The Hukam Chand Electric Steel Works, includes all classes of important steel castings employed on carriages and wagons. For locomotives the following may be added:—

Bogie centres and carriers.

Answer 2.—Yes.

Answer 3.—To judge from the steel castings produced by the Bombay, Baroda and Central India Railway, at Ajmere, there seems to be no inherent difficulty so far as manufacture is concerned. We are not in a position to give any views on raw material.

Answer 4.—Please see statement attached (Enclosure No. 1).

Answer 5.—Please see the statement and note attached (Enclosure No. 2).

Answer 6.—(*a*) Imported castings are tested by the Consulting Engineer in England to this Railway.

(*b*) Castings obtained in India are tested by the Indian Stores Department.

Answer 7.—We do not manufacture steel castings as we have no steel foundry.

Answer 8.—See answer to question 7.

Answer 9.—See answer to question 7.

Answer 10.—Yes. Messrs. The Hukamchand Electric Steel Works have recently manufactured cast steel axle-boxes for carriage and wagon stock and the workmanship was such that a number of defects had to be remedied before the axle-boxes could be used. The Indian Stores Department attributed this to unmachined castings having been ordered. The explanation, however, cannot be accepted, as imported axle-boxes are not machined in any way but fitted direct to stock as received.

Our experience is that Indian manufactured cast steel axle-boxes are decidedly inferior to the imported article.

With regard to castings for locomotives, these have been obtained from the Bombay, Baroda and Central India Railway, Ajmere, and from Messrs. The Angus Engineering Company, Bhadreswar. Our demands have been comparatively small and we cannot, in the circumstances, express our opinion on the quality and workmanship.

Answer 11.—Please see statement attached (Enclosure No. 3).

Answer 12.—Please see statement attached (Enclosure No. 4).

Answer 13.—Practically no steel castings for general engineering purposes have been purchased in India.

The quantity of steel castings forming part of structures imported for general engineering purposes cannot readily be estimated.

Answer 14.—See answer to question No. 13.

Answer 15.—See answer to question No. 13.

Answer 16.—We have only 280 wagons in commission which are fitted with cast iron axle-boxes and the majority of this stock is near condemning age. Moreover the stock being of low capacity, it is considered uneconomical to replace the axle-boxes at this stage. As regards locomotives the standard axle box is of cast steel and probably all our locomotives are fitted with such axle boxes.

Answer 17.—About 20: 1 in favour of cast steel.

Answer 18.—The adoption of centre buffer couplers is under consideration by the Railway Board. No definite scheme has yet been issued.

Answer 19.—We are not in a position to give a definite opinion on this point. In any case, such couplers are proprietory articles and their manufacture in India may not be possible.

Answer 20.—The required information is given in the attached statement (Enclosure No. 5).

Answer 21.—Our principal workshops are situated at Lahore. The freight charges from Calcutta to Lahore and from Karachi (port of importation) to Lahore are given below:—

From Calcutta to Lahore.

Re. 1-5-3 for packages below 10 tons.

Re. 1 for packages over 10 tons.

From Karachi to Lahore.

Re. 0-14-5 for packages below 10 tons.

Re. 1-10-11 for packages over 10 tons.

Answer 22.—No.

Enclosure No. 1.

Answer to question No. 4.—The following quantities in cwts. were obtained:—

(*a*)

	1921-1922.		1922-1923.		1923-1924.		1924-1925.		1925-1926.		1926-1927.
	British.	Continental.	British.	Continental.	British.	Continental.	British.	Continental.	British.	Continental.	
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Locomotive . . .	2,536	2,805	49	1,180	...	...	177	...	52	...	1,735
Carriage and Wagon .	6,771	...	2,873	...	269	...	1,299	727	1,186	747	6,419
Engineering Works .	...	...	41	...	...		37	...	482	...	...

(*b*)

	1921-1922.	1922-1923.	1923-1924.	1924-1925.	1925-1926.	
	Cwts.	Cwts.	Cwts.	Cwts,	Cwts.	
Locomotives . .	430	...	100	...	1,379	
Carriage and Wagon .	...	157	397	101	...	
Engineering Works .	...	...	...	...	...	

(*c*) *Nil.*

Enclosure No. 2.

Answer to question No. 5.—Prices in cwts. varied as follows:—

Class of castings.	1921-1922.			1922-1923.			1923-1924.			1924-1925.			1925-1926.			Remarks.
	British.	Continental.	Indian.	British.	Continental.	Indian.	British.	Continental.	Indian.	British.	Continental.	Indian.	British.	Continental.	Indian.	
Locomotive steel castings—																
Weight. .	cwt 2,536	cwt 2,805	cwt 420	cwt 49	cwt 180	...	...		cwt 100	cwt 177	...	...	cwt 53	...	cwt1,370	
Rate .. .	£3-6-0 to 6-0	£0-18-4 to 1-12-7	R41-6-0 to 45-0-0	£2-14-0 to 3-0-0	£1-0-0	...	...	...	R35-0-0 to 45-0-0	£3-0-0 to 3-15-0	...	...	£4-4-0 to 5-5-0	...	R35-0-0 to 38-0-0	
C. and W. steel castings—																
Weight. .	cwt 6,771	...	...	cwt 2,873	...	cwt 157	cwt 362	...	cwt 397	cwt 299	cwt. 727	cwt 101	cwt1,186	cwt 747	...	
Rate . .	£1-15-1 to 2-16-6	...	...	£1-8-0 to 2-19-5	...	R45-0-0	£2-3-4 to 4-11-8	...	R35-0-0	£2-0-0 to 6-4-0	£1-7-6 to 1-13-10	R33-0-0 to 42-0-0	£1-10-3	£ 1-5-9	R35 0-0	

NOTE.—Cost of imported castings is quoted in sterling and that of castings obtained in India in rupees.

Continental castings were obtained from Belgium and Germany.

The above are actual quoted rates and do not include freight and other charges; these can be ascertained on the basis of the attached note.

Note on freight and other charges.

The following charges are to be added to the f.o.b. rates shown in the statement attached, to cover charges for freight, landing, etc.:—

1. Sea freight for axle-boxes, 45*s.* per ton. 2. Interest, 18*s.* 4*d.* per £100. 3. Insurance, 4*s.* per £100. 4. Freight brokerage, 6*d.* per ton. 5. Wharfage charges, Rs. 2-2 per ton. 6. Handling charges, Re. 0-10 per ton. 7. Customs duty, (*a*) 10 per cent. *ad valorem.*	These are the current charges and are subject to alteration according to the revision made by the India Office and I. S. D. from time to time. On supplies received from Home through the Agency of the India Office 3 per cent. departmental charges are paid to the Director General of Stores in lieu of the charges marked (2), (3) and (4).

(*a*) According to Tariff Schedule.

Enclosure No. 3.
Answer to question No. 11.—

Description.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Imported locomotives	*nil*	7,610	21,600	600	*nil*	3,520
Locomotives built in India	*nil*	*nil*	*nil*	*nil*	*il*	*nil*
Imported wagons	2,224	2,881	14	2,418	4,602	3,056
Wagons built in India	272	288	16	*nil*	*nil*	2,964
Imported coaching underframes	350	278	2,222	252	1,257	1,212
Coaching underframes built in India	188	1,169	363	2,336	204	132

NOTE.—Prices cannot be given as contracts do not show the cost of steel castings separately.

Enclosure No. 4.

Answer to question 12 –

(*a*) (1).

Description.	1927-28	1928-29.	1929-30.	1930-31.	1931-32.
	Total weight.	Total weight.	Total weight.	Total weight.	Total weight.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Locomotive steel castings	1,310	1,310	1,310	1,310	1,310
C. and W. steel castings	5,286	5,286	5,286	5,286	5,286

(*a*) (2).

Locomotives	18,000	24,000	16,000	13,200	8,000
Coaching underframes	1,655	1,767	1,767	1,767	1,767
Wagons	6,647	5,090	5,228	5,274	5,274

(*b*) *Nil.*

Enclosure No. 5.

Answer to question No. 20.—

Year.	Total quantity of scrap steel.	Total amount realized.	Average rate per ton f. o. r. works.
	Tons.	Rs.	Rs.
1922	562	51,974	92
1923	1,928	82,568	43
1924	7,579	2,94,596	39
1925	4,812	1,67,798	35
1926	1,829	64,563	35

N.B.—It has not been possible to sell steel borings, turnings, shavings, etc., by the Railway. Information for the year 1921 cannot be given as the records have since been destroyed.

XXI.—Questionnaire issued by the Tariff Board to the Railway Board and Railways.

Wagons.

1. What is the total number of wagons and coaches used by your railway on the broad and metre gauges respectively? How many of these are of the main types?

2. Please state the present position in regard to the standardisation of types both of wagons and coaches and whether your Company contemplates a reduction in the number of types and if so, to what extent.

3. Please state—

(*a*) your requirements since 1923-24 of each type of wagon and coach, or

(*b*) your requirements in 1926-27 and

(*c*) your average requirements for each of the five years subsequent to 1926-27 in so far as it may now be possible to estimate them.

4. Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of wagon and underframe:—

(1) Date on which the tenders were opened.

(2) Type of wagon or underframe for which tenders were sent in and whether broad gauge or metre gauge.

(3) Number of units of each class stated in the call for tenders.

(4) The three lowest British tenders.

(5) The three lowest Continental or American tenders and the country from which they were sent in.

(6) The Indian tenders and the names of the firms tendering.

(7) The price and other conditions subject to which the order was placed and the name of the firm to which it was given.

(8) The number of units for which the order was actually placed.

N.B.—1. If any of the British, Continental or American tenders were ruled out on grounds other than price they should be excluded in determining which tenders should be treated as the three lowest.

2. In order that the prices tendered by European or American firms may be comparable with the Indian tenders, certain additions, *e.g.*, for lighting equipment, hand brakes, step irons and the like have to be made to the price actually tendered by the foreign manufacturer and the prices entered in the statements should indicate and include the necessary adjustments.

5. With reference to clause (7) of question 4, please give the lowest British, Continental and American prices for each type of wagon and underframe in the following form:—

(*a*) Price f.o.b. port (in sterling).

(*b*) Freight, insurance and freight brokerage (in sterling).

(*c*) Total c.i.f. price (in rupees).

(*d*) Rate of exchange taken for conversion purposes.

(*e*) Customs duty (in rupees).

(*f*) Landing, wharfage and port charges (in rupees).

(*g*) Estimated cost of erection (in rupees) in the following form:—

1. Labour, etc.
2. Stores.
3. Supervision, overhead charges, etc.

(*h*) Total cost (in rupees).

6. Do you build wagons or carriage underframes in your own workshops? If so, please give the present cost excluding that of wheels and axles of a typical unit of each class of (*a*) wagon completely erected and ready to run and (*b*) underframe, under the following headings:—

I. Works Costs.

Type and description of $\frac{\text{Wagon B. G. M. G.}}{\text{Underframe B. G. M. G.}}$

	Weight.	Rate.	Value.
1. Materials, *e.g.*—			
Steel, Indian			
Steel, Imported, British			
Steel, Imported, Continental			
Castings, Indian			
Castings, Imported, British			
Castings, Imported, Continental			
Fittings			
Other materials			
Stores, etc.			
2. Cost above materials—			
Power			
Fuel			
Labour			
Repairs			
General works-supervision			
Nett cost per unit of output			
Total number of units of each type turned out in the year			

7. Please state the total quantities, weight and price per set of wheels and axles—

(*a*) British,

(*b*) Continental,

purchased by your railway for each year from 1922-23 to 1925-26. In the case of Continental wheels and axles please distinguish the country of origin.

8. For both British and Continental wheels and axles, kindly state, where possible, the sterling f.o.b. prices, charges for freight, landing, etc., separately. If this is not possible, kindly state the c.i.f. price in sterling.

9. (*a*) If you have purchased or propose to purchase Continental wheels and axles, kindly state fully the considerations which have influenced you in doing so.

(*b*) What specifications, if any, are prescribed for Continental wheels and axles? Are any arrangements made for the inspection of such wheels and axles during manufacture? What arrangements, if any, are made for the testing of such wheels and axles in the country of origin?

10. What has been your experience in regard to the quality of Continental wheels and axles?

11. Has any progress been made since the Board's enquiry in 1923-24 towards the adoption for wagon axles, tyres and springs of the alternative British standard specifications or any other specifications which permit the use of basic open hearth steel for these purposes? If not, why not?*

* *Vide* questionnaire II (*c*) dated 26th September 1923, page viii, Volume III of the evidence recorded during the enquiry into the Steel Industry.

12. A proposal has been made for the abolition of the system of bounties now in vogue and for the substitution of an *ad valorem* or a specific duty on imported wagons and underframes. In the event of the proposal being accepted, please state to what extent the annual capital or revenue expenditure of your railway would be increased for every Rs. 10 of duty levied on a wagon or an underframe on the assumption that the price was increased to the full extent of the duty.

13. Please state whether, in your opinion, the wagon building industry in India has now reached a stage when it can efficiently meet most of your requirements in regard to wagons and underframes. If you consider that it has not done so, please state in what respect you consider that it still falls short of the requisite standard.

14. Please state to what extent your requirements as to wagons and underframes are obtained through the Railway Board.

15. Please describe briefly the procedure followed in the purchase of wagons and carriage underframes when it is effected without the intervention of the Railway Board and state how far the rules for the purchase of articles for the public service issued by the Government of India are applicable to, or are followed by, your railway.

XXII.—Replies to questionnaire regarding Wagons.

(1) ASSAM BENGAL RAILWAY COMPANY, LIMITED.

Letter, dated the 14th July 1926.

With reference to your letter No. 307, dated the 29th May 1926, I have the honour to forward herewith a statement containing the replies to the questionnaire on the subject of wagons.

ASSAM BENGAL RAILWAY COMPANY, LIMITED.

(Incorporated in Great Britain.)

(METRE GAUGE.)

Answers to questionnaire of Tariff Board regarding Wagons and Coaches.

Questions by Tariff Board.	Answers.
1. What is the total number of wagons and coaches on your Railway ? How many of these are main types ?	Wagons . . . . . 5,318 Coaches . . . . . 593 The main types are as follows :— *Wagons.* Covered goods wagons iron four-wheeled . 4,023 Ditto bogie . . 100 High sided wagons bogie . . . 44 Timber trucks, bogie . . . . 144 Oil tank wagons 6-wheeled . . . 25 Petrol tank wagons bogie . . . 16 Brake van goods, 4-wheeled . . . 5 4,351 *Coaches.* Upper class, bogie . . . . . 105 Inter and 3rd class composite bogie . . 29 Third class, bogie . . . . . 209 Brake van with Inter bogie . . . 35 „ 4-wheeled . . . . 63 Third class with mails . . . . 28 TOTAL . 469
2. Please state the present position in regard to the standardisation of types both of wagons and coaches and whether your Company contemplate a reduction in the number of types and if so to what extent ?	All our future stock of both coaching and goods stock will be Indian Railways Conference Association's standard type. All old stock will be replaced by standard type No further reduction in the types is contemplated.

Questions by Tariff Board.	Answers.
3. Please state— (*a*) requirements since 1923-24 of each type of wagon and coach, or (*b*) Requirements in 1926-27 .	1923-24. 1924-25. 1925-26. (*a*) *Wagons*— Petrol tank wagons, bogie . . . *Nil.* *Nil.* 8 (*b*) Coaches— . . . *Nil.* *Nil.* *Nil.* *Wagons*— 1926-27. Petrol tank wagons, bogie . . 16 *Coaches*— Third class, bogie . . . . 10 Brake-van with inter comptt., bogie . 5
(*c*) Average requirements for each of the 5 years subsequent to 1926-27 so far as it may now be possible to estimate them.	1927-28. 1928-29. 1929-30. 1930-31. 1931-32. (*c*) *Wagons*— Covered goods wagons, iron, 4-wheeled . 50 50 153 100 100 *Coaches*— Third class carriages . . 15 15 10 10 10
4 & 5. Particulars of purchase, tenders, prices, &c.	These questions cannot be answered without reference to the Board of Directors in London.
6. Do you build wagon or carriage underframe in your own workshops ? If so, &c., &c.	No.
7. Please state the total quantity weight and price per set of wheels and axles— (*a*) British, (*b*) Continental, purchased by your railway from 1922-23 to 1925-26.	The number of wheels and axles received from 1922-23 to 1925-26 is as follows :— No. of pairs. / Approx. Weight. Cwts. / Home contract price per pair. £ s. d. 1922-23 . 64 720 47 15 0 128 1,417 20 19 0 132 1,480 *20 13 6 1923-24 . 100 1,120 20 0 0 100 1,120 19 10 0 570 6,400 Price not known, these wheels and axles were received with 285 I. C. G. S. ordered in 1922 and their cost was included in the cost of underframes. No purchase has been made since 1923-24. No Continental wheels and axles were purchased : all the wheels and axles purchased are British. * Received with stock ordered in 1922.
8. For both British and Continental wheels and axles, kindly state where possible, the sterling f. o. b. price, charges for freight, landing, &c., separately. If this is not possible, kindly state the c. i. f. price in sterling.	The sterling f. o. b. price per pair is £19-10-0 to £20-0-0 and the average price c. i. f. is £21-1-11, the lowest price c. i. f. being £20-16-6 and the highest £21-8-5.

Questions by Tariff Board.	Answers.
9 (*a*) and (*b*) and 10.. . .	As stated in reply to question 7, no Continental wheels and axles have been purchased by this Railway.
11. Has any progress been made since the Board's enquiry in 1923-24 towards adoption for wagons axles, tyres and springs of the alternative British standard specifications or any other specifications which permit the use of basic open hearth steel for these purposes ? If not, why not ?	The Consulting Engineers' specification shews that basic open hearth process has been adopted for axles and tyres.
12. A proposal has been made for the abolition of the system of bounties now in vogue and for the substitution of an *ad valorem* or a specific duty on imported wagons and underframes. In the event of the proposal being accepted, please state to what extent the annual capital or revenue expenditure of your railway would be increased for every Rs. 10 of duty levied on a wagon or an underframe on the assumption that the price was increased to the full extent of the duty.	The total number of wagons to be purchased during the next 5 years *vide* answer to question 3 (*c*) is 453.
13. Please state whether, in your opinion, the wagon building industry in India has now reached a stage when it can efficiently meet most of your requirements in regard to wagons and underframes. If you consider that it has not done so, please state in what respects you consider that it still falls short of the requisite standard.	I have no information regarding this.
14. Please state to what extent your requirements as to wagons and underframes are obtained through the Railway Board.	Tenders called for by the Railway Board were accepted for 285 I. C. G. and 25 B. T. T. purchased from England in 1922. Previous to this all our rolling stock were purchased through our Consulting Engineers at Home.

Questions by Tariff Board.	Answers.
15. Please describe briefly the procedure followed in the purchase of wagons and carriage underframes when it is effected without the intervention of the Railway Board and state how far the rules for the purchase of articles for the public service issued by the Government of India are applicable to, or are followed by, your railway.	All our rolling stock are purchased through our Consulting Engineers at Home— Messrs. Rendel, Palmer & Tritton.

2. BENGAL NAGPUR RAILWAY COMPANY, LIMITED.

Letter, dated the 2nd July 1926.

With reference to your letter No. 307, dated the 29th May 1926, I beg to enclose my replies to the questionnaire of the Tariff Board in regard to wagons, etc.

Questionnaire regarding Wagons.

Question No. 1.—Please see statements " A " and " B " enclosed.

Question No. 2.—The Bengal Nagpur Railway has its own standards and has not adopted the I. R. C. A. standards for wagons and coaches, except for interchangeable details.

It is not at present contemplated to reduce the number of standard types.

Question No. 3.—(*a*) Please see statements " C " and " D " enclosed.

(*c*) Please see statement " E ".

Question No. 4.—(1)—(6) I am not in a position to reply as purchases are made by my Board of Directors in London.

(7) Please see statement " F ". The orders were placed with Messrs. Cammel Laird & Co.

(8) Please see statements " G " and " H " enclosed.

Question No. 5.—See answer to 4 (1)—(6).

Question No. 6.—No.

Question No. 7.—Wheels and axles were not purchased separately in complete sets.

Question No. 8.—(*b*) Does not arise.

Question No. 9.—(*a*) See answer to Question No. 4 (1)—(6).

(*b*) Specifications are prepared by the Company's Engineers in London and inspection arranged by them.

Question No. 10.—We have none in use.

Question No. 11.—The answer is in the negative. We follow the standard British practice in this respect.

Question No. 12.—The answer to this question is understood as being:—

(*a*) Rs. 10 × No. of wagons to be imported as a charge to Capital.

(*b*) Rs. 10 × No. of wagons to be imported as a charge to Revenue.

The figures are:—

	Capital.	*Revenue.*
	Rs.	Rs.
1926-27	350	140
1927-28	...	150
1928-29	...	...
1929-30	...	...
1930-31	...	...

Question No. 13.—We have insufficient experience of the work of wagon builders in India to enable me to give satisfactory reply to this question

Question No. 14.—*Nil.*

Question No. 15.—Wagons and underframes are obtained by indent on my Board of Directors who arrange purchase with the assistance of the Consulting Engineers.

Enclosure No. 1

BENGAL NAGPUR RAILWAY COMPANY, LIMITED.

(Incorporated in England.)

COACHING STOCK—BROAD GAUGE.

30th April 1926.

Description of stock.		Total stock on the list on 30th April 1926.
I. Passenger carriages of uniform class—		
First class carriages	4-wheeled	23
	Bogie	2
Second class carriages	4-wheeled	23
	Bogie	4
Intermediate class carriages (without brake compartments).	4-wheeled	31
	Bogie	34
Third class carriages (without brake compartments).	4-wheeled	219
	Bogie	323
	Ambulance, 4-wheeled	5
II. Composite Passenger Carriages excluding those fitted with brake van or mail accommodation—		
Composites First and Second class (including those with Third class servants' accommodation).	4-wheeled	47
	Bogie	49
Other Composites	4-wheeled	10
	Bogie	22
III. Composite Passenger Carriages with brake van or mail accommodation—		
Third class carriages with brake compartments or brake vans.	4-wheeled	58
	Bogie	70
Intermediate class carriages with brake compartments or brake vans.	4-wheeled	...
	Bogie	7
Other composites	4-wheeled	14
	Bogie	5

Description of stock.		Total stock on the list on 30th April 1926.
IV. Brake vans, luggage and brakes and brake vans with mail accommodation (excluding those forming part of composite passenger carriages)—		
Brake vans and luggage and brakes used exclusively on passenger service.	4-wheeled	32
	Bogie	...
Brake vans fitted with (Mails Newspaper letter sorting).	4-wheeled	...
	Bogie	9
V. Military Cars	4-wheeled	...
	Bogie	...
VI. Dining Cars	4-wheeled	...
	Bogie	12
VII. Saloons, Royal and State	4-wheeled	...
	Bogie	1
VIII. Reserved Carriages for use of Public	4-wheeled	...
	Bogie	6
IX. Mails (Newspaper letter sorting)		...
X. Carriages and Motor Vans	4-wheeled	55
	Bogie	...
XI. Horse Vans		14
XII. Luggage Vans		29
XIII. Miscellaneous (excluding Departmental)		5
XIV. Departmental including Officers' Carriages	4-wheeled	73
	Bogie	5
	TOTAL	1,217

KHARGPUR;

17th June 1926.

Enclosure No. 2.

BENGAL NAGPUR RAILWAY COMPANY, LIMITED.

(Incorporated in England.)

GOODS STOCK—BROAD GAUGE.

30th April 1926.

Description of stock.		Total stock on the list on 30th April 1926.
I. Covered Wagons—		
4-wheeled	17 tons and under	3,712
	Over 17 and up to 24 tons	4,009
II. Open Wagons, low-sided—		
4-wheeled	17 tons and under	245
	Over 17 and up to 24 tons	...
Bogie	Over 24 and up to 36 tons	...
	Over 36 tons	...
III. Open Wagons, highsided—		
4-wheeled	17 tons and under	1,356
	Over 17 and up to 24 tons	11,324
Bogie	Over 24 and up to 36 tons	...
	Over 36 tons	966
IV. Special Wagons—		
Live stock wagons	4-wheeled	46
	Bogie	...
Wagons for explosives	4-wheeled	10
	Bogie	...
Timber or rail wagons	4-wheeled	362
	Bogie	550
Tank wagons	4-wheeled	146
	Bogie	...
Miscellaneous Wagons	4-wheeled	49
	Bogie	8
Travelling Cranes		38
and their dummies	4-wheeled	22
V. Brake Vans used indiscriminately on passenger, goods and mixed services.	4-wheeled	595
	Bogie	...

Description of stock.		Total stock on the list on 30th April 1926.
VI. Departmental vehicles (including inspection trollies)		...
VII. Ballast wagons	4-wheeled	64
	Bogie	...
Other vehicles	4-wheeled	58
	Bogie	...
Motor Inspection Trollies		4
Road Motors.		
Motor Cars (Passengers)		1
Motor trains (for passengers or goods)		...
Motor Vans (for parcels or goods)		...
	TOTAL	23,565

KHARGPUR;
17th June 1926.

Enclosure No. 3.

Statement re *Item 3 (a)—Wagons 5' 6" Gauge.*

Type of wagons.	1923-24.	1924-25.	1925-26
Bogie Rail Wagons	100	...	...
Bogie Iron Ore Hopper Wagons	175	50	150
Bogie Coal Hopper Wagons	50	...	...
Four-wheeled Covered Goods Wagons	100	250	200
Four-wheeled Open Goods Wagons	238	239	200
Four-wheeled Caboose Brake Vans	80	40	15

KHARGPUR;
17th June 1926.

Enclosure No. 4.

Statement re *Item 3 (a)—Carriages 5' 6" Gauge.*

Class of Carriage.	1923-24.	1924-25.	1925-26.
Bogie I class	5	...	...
Bogie Compo. I and II class	9	15	...
Bogie II class	4	...	...
Bogie Inter class	13	...	...
Bogie Compo. Inter and III class . . .	3	...	...
Bogie III class	56	...	...
Bogie luggage and Brake Vans . . .	...	...	...

KHARGPUR;
17th June 1926.

Enclosure No. 5.

Statement re *Item 3 (c)—Wagons and Carriages 5' 6" Gauge.*

Type of Wagon and Class of Carriage.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Four-wheeled Coal Tar Tank Wagons.	15	...	...	...	...
Bogie Compos. I and II class . .	8	...	...	...	...
Bogie Inter class	8	...	...	...	...
Bogie III class	...	...	...	15	...
Bogie Luggage and Brake Vans .	14	14	14	...	...
Bogie III class Luggage and Brake Vans.	8	8	8	8	...

KHARGPUR.
16th June 1926.

Enclosure No. 6.

List of wagons purchased during the period 1922-23 to 1925-26.

Particulars.	F.O.B. price for each.	Date of completion of Contract.
	£ s. d.	
1922-1923.		
15 Caboose Brake vans	390 14 0	4th May 1923.
2 Well Trucks	1,200 0 0	Do.
288 K. G. type wagons	400 0 0	9th March 1923.
100 "D" type wagons	485 0 0	9th April 1923.
100 L. B. Rail wagons	1,290 0 0	20th April 1923.
35 Caboose Brake vans	390 14 0	23rd April 1923.
12 K. G. type wagons	400 0 0	9th March 1923.
100 K. G. type wagons	378 0 0	10th April 1923.
50 Iron Ore K. O. type	1,128 0 0	23rd April 1923.
1923-1924.		
50 Iron Ore K. O. type	1,128 0 0	5th July 1923.
50 Coal Hoppers C. H. B.	1,130 0 0	5th September 1923.
100 "D" type wagons	389 6 6	24th March 1924.
200 K. G. type wagons	377 16 0	12th January 1924.
100 L. B. Rail wagons	1,123 5 0	1st April 1924.
50 Iron Ore K. O. type	800 0 0	9th February 1924.
80 Caboose Brake vans	380 13 0	5th April 1924.
38 K. G. type wagons	317 13 0	4th April 1924.
75 Iron Ore K. O. type	800 9 6	15th April 1924.
1924-1925.		
250 "D" type wagons	376 19 6	6th January 1925.
50 Iron Ore K. O. type	777 10 0	31st March 1925.
40 Caboose Brake vans	380 7 6	13th February 1925.
200 K. L. type wagons	352 13 6	30th March 1925.
39 K. L. type wagons	352 13 6	4th April 1925.
1925-1926.		
200 "D" type wagons	369 0 0	18th February 1926.
200 K. L. type wagons	352 5 0	1st October 1925.
120 Iron Ore K. O. type	778 3 5	2nd November 1925.
15 Caboose Brake vans	324 10 0	28th September 1925.
30 Iron Ore K. O. type	778 3 5	2nd November 1925.

Enclosure No. 7.

Statement re *Item 4 (8)—Wagons 5' 6" Gauge.*

Type of wagon.	1922-23.	1923-24.	1924-25.	1925-26.
Bogie Well Wagons	2	...	...	...
Bogie Rail Wagons	100	100	...	...
Bogie Iron Ore Hopper Wagons	50	175	50	150
Bogie Coal Hopper Wagons	...	50	...	...
Four-wheeled Covered Goods Wagons	100	100	250	200
Four-wheeled Open Goods Wagons	400	238	239	200
Four-wheeled Caboose Brake Vans	50	80	40	15

KHARGPUR.
16th June 1926.

Enclosure No. 8.

Statement re *Item 4 (8)—Carriages 5' 6" Gauge.*

Class of Carriage.	1922-23.	1923-24.	1924-25.
Bogie Dining Car	1	...	...
Bogie I class	...	5	...
Bogie Compo. I and II class	...	9	15
Bogie II class	1	4	...
Bogie Inter class	2	13	...
Bogie Compo. Inter and III class	...	3	...
Bogie III class	15	56	...
Artriculated Bogie III class	8	...	...
Bogie III class. Luggage and Brake Van	4	...	...
Bogie Touring Saloon 65 0" long	1	...	...
Bogie Touring Saloon 40' 0" long	3	...	...
Bogie Luggage and Brake Van	...	...	...
Four-wheeled Horse Boxes	2	...	...

KHARGPUR;
17th June 1926.

3. BOMBAY, BARODA AND CENTRAL INDIA RAILWAY COMPANY.

(1) *Letter No. T.-219-C.-2, dated the 8th July 1926.*

I beg to enclose a copy (with six spare copies) of replies to the questionnaire regarding wagons.

Questions.	Answers.	
	Metre Gauge.	Broad Gauge.
1. What is the total number of wagons and coaches used by your railway on the broad and metre gauges respectively.	Coaches—1,721 Wagons—9,865.	Statement G attached.
How many of these are of the main types.	Statement A attached	.....
2. Please state the present position in regard to the standardisation of types both of wagons and coaches and whether your company contemplates a reduction in the number of types and if so to what extent.	Standardisation is still more or less in the air and the latest Railway Board Standard Committee's recommendation if agreed to would wash out all metre gauge standard types at present adopted. We still continue to build to standards previously recommended for adoption.	In future practically all vehicles will be built to I. R. C. A. standard designs. Only in special cases will these standards not be adopted.
3. Please state—		
(*a*) Your requirements since 1923-24 of each type of wagon and coach	Statement B attached	Statement H attached.
or		
(*b*) Your requirements in 1926-27	Statement C attached.	
and		
(*c*) Your average requirements for each of the five years subsequent to 1926-27 in so far as it may now be possible to estimate them.	Statement D attached	

. Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of wagon and underframe :—		
(*a*) Date on which tenders were opened	We do not open tenders	Tenders are opened by the Home Board.
(*b*) Type of wagon or underframe for which tenders were sent in and whether Broad Gauge or Metre Gauge.	Except 150 covered wagons 20′ long ordered from Messrs. Burn & Co. in 1921 we build our own wagons. The supply of these was completed in 1923-24.	.....
(*c*) Number of units of each class stated in the call for tenders.	*Nil.*	
(*d*) The three lowest British tenders .	Information not available	
(*e*) The three lowest Continental or American tenders and the country from which they were sent in.	Ditto	
(*f*) The Indian tenders and the names of the firms tendering..	Ditto	
(*g*) The price and other conditions subject to which the order was placed and the name of the firm to which it was given.	Ditto	
(*h*) The number of units for which the order was actually placed.	*Nil.*	
N.B.—(1) If any of the British, Continental or American tenders were ruled out on grounds other than price, they should be excluded in determining which tenders should be treated as the three lowest.		

Questions.	Answers.	
	Metre Gauge.	Broad Gauge.
(2) In order that the prices tendered by Europeans or American firms may be comparable with the Indian tenders, certain additions, *e.g.*, for lighting equipment, hand brakes, step irons and the like have to be made to the price actually tendered by the foreign manufacturer and the prices entered in the statements should indicate and include the necessary adjustments.	Information not available.	.....
5. With reference to clause G of question 4, please give the lowest British, Continental and American prices for each type of wagon and underframe in the following form :—	The Railway Board call for tenders and could possibly give this information. We build our own wagons from raw material.	See Statement 1 attached.
(*a*) Price f.o.b. port (in sterling).		
(*b*) Freight insurance and freight brokerage (in sterling).		
(*c*) Total c.i.f. price (in rupees).		
(*d*) Rate of exchange taken for conversion purposes.		
(*e*) Customs duty (in rupees).		

(*f*) Landing, wharfage and port charges (in rupees).

(*g*) Estimated cost of erection (in rupees) in the following form :—
1. Labour, etc.
2. Stores.
3. Supervision, overhead charges, etc.

(*h*) Total cost in rupees.

6. Do you build wagons or carriage underframes in your own workshops. If so please give the present cost excluding that of wheels and axles of a typical unit of each class of (*a*) wagon completely erected and ready to run, and (*b*) underframes under the following headings :—

Yes . . . . .

Carriages with wood bodies are built in our works complete with underframes and bogies.
Wagon stock to I. R. C. A. is bought from contractors.
Steel stock is bought complete with bogies and underframes from contractors.

1. *Works Costs*—

Type and description of wagon $\frac{\text{B. G.}}{\text{M. G.}}$ underframe

Statement E attached . . . . .

Special designs of wagons are built in our works.
(*a*) The cost of special designs is presumably not required as they are not comparative.
(*b*) It is impossible to give the costs of a carriage underframe in the form demanded by the question because the source of supply is in some cases not known and the Works' analysis of costs do not allocate and proportion certain charges in the manner desired.
The recent I. R. C. A. standard underframes cost Rs. 14,794 exclusive of wheels and axles, but this price is not comparative, because it includes many alterations to the design

$\frac{\text{B. G.}}{\text{M. G.}}$

	Weight	Rate	Value
1. Materials, *e.g.*—			
Steel, Indian.			
„ Imported, English.			
„ „ Continental.			

Questions.	Answers.	
	Metre Gauge.	Broad Gauge.
Castings, Indian. „ Imported British. „ „ Continental. Fittings. Other materials. Stores.		as originally constructed. The costs of these alterations cannot be separated from the main account.
2. Cost above materials— Power. Fuel. Labour. Repairs (to machinery). General Works supervision. Net cost per unit or output. Total number of units of each type turned out in the year.		
7. Please state the total quantities, weight and price per set of wheels and axles— (*a*) British (*b*) Continental purchased by your railway for each year from 1922-23 to 1925-26. In the case of Continental wheels and axles, please distinguish the country of origin.	Statement F attached	See statement II attached.

8. *For both British and Continental* wheels and axles, kindly state where possible. the sterling f.o.b. prices, charges for freight, landing, etc., separately. If this is not possible kindly state the c.i.f. price in sterling.	Statement F attached . . .	Ditto.
9. (*a*) If you have purchased or propose to purchase Continental wheels and axles, kindly state fully. the considerations which have influenced you in doing so.	Rests with the Home Board and Consulting Engineers.	Rests with the Home Board.
(*b*) What specifications, if any, are prescribed for Continental wheels and axles. Are any arrangements made for the inspection of such wheels and axles during manufacture. What arrangements, if any, are made for testing of such wheels and axles in the country of origin.	Rests with the Home Board and Consulting Engineers.	The specifications for material purchased in England and the Continent are issued by the Consulting Engineers in London and we cannot give the information required.
10. What has been your experience in regard to the quality of Continental wheels and axles.	No marked difference in quality has come to light.	The quality of Continental made wheels and axles has been satisfactory.
11. Has any progress been made since the Board's enquiry in 1923-24 towards the adoption for wagon axles, tyres and springs of the alternative British Standard Specifications or any other specifications which permit the use of basic open hearth steel for these purposes. If not, why not?*	This information can only be given by the Consulting Engineers.	This information can only be given by the Consulting Engineers.

* *Vide* questionnaire II (c) dated 26th September 1923. page viii, volume III of the evidence recorded during the enquiry into the steel industry.

Questions.	Answers.	
	Metre Gauge.	Broad Gauge.
12. A proposal has been made for the abolition of the system of bounties now in vogue and for the substitution of an *ad valorem* or a specific duty on imported wagons and underframes. In the event of the proposal being accepted please state to what extent the annual capital or revenue expenditure of your railway would be increased for every Rs. 10 of duty levied on a wagon or an underframe on the assumption that the price was increased to the full extent of the duty.	No underframes or wagons are at present imported for the metre gauge system.	Assuming that during the next five years we purchase 275 wagons per year from England our expenditure would be increased by Rs. 2,750 per annum for every Rs. 10 of duty levied per wagon.
13. Please state whether in your opinion the wagon building industry in India has now reached a stage when it can efficiently meet most of your requirements in regard to wagons and underframes. If you consider that it has not done so, please state in what respects you consider that it still fails short of the requisite standard.	Impossible to say as on this system (metre gauge) we have only been supplied by 150 wagons by an Indian firm in 1923-24 and the rate was very high.	The question entirely depends upon output presuming that firms manufacturing in India purchase wheels and axles from England or the Continent. Presuming that all Indian Railways place their requirements with Indian firms, it is a question as to whether satisfactory delivery could or could not be given.
14. Please state to what extent your requirements as to wagons and underframes are obtained through the Railway Board.	*Nil* for metre gauge—	In some cases simultaneous tenders are let through the Railway Board.

15. *Please describe briefly the* procedure followed in the purchase of wagons and carriage underframes when it is effected without the intervention of the Railway Board and state how far the rules for the purchase of articles for the public service issued by the Government of India are applicable to, or are followed by your railway.	We order all raw material from England. Only wheels and axles, draw bar springs and door controllers are ordered complete. About 50 per cent. of the wheel centres are made here and fitted with tyres and axles out from home.	We purchase our wagons and underframes by a direct indent on our Home Board who in turn ask our Consulting Engineers to draw up specifications, invite tenders and to make their recommendations when received. The tenders are finally settled by our Home Board and the Consulting Engineers are asked to inspect the work in progress of manufacture and to arrange Shipment with our Shipping Department. As far as possible the rules for the purchase of articles for public service issued by the Government of India are followed by us.

Enclosure No. 1.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY—BROAD GAUGE.

G.

Question 1.

	Bogies non-standard.	Four-wheelers non-standard.	Bogie I. R. C. A. standard underframes.	Four-wheelers I. R. C. A. standard underframes.
Coaches . . .	556	355(*a*)	103	10

(*a*) This includes 10 six-wheelers.

	Bogie non-standard.	Four-wheelers non-standard.	Four-wheelers I. R. C. A. standard.
Wagons . . .	198	9,445(*b*)	1,704

(*b*) This includes 102 six-wheelers.

Enclosure No. 2.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY—METRE GAUGE.

A.

Para. 1.

The following coaches and wagons of the main type are in use :—

		In use on 31st May 1926.
	Coaches.	
22'-6"	Family Firsts	14
22'-0"	Double "	...
22'-0"	Composites 1st and 2nd	6
22'-0"	Double Seconds	32
54'-6"	Bogie Composite 1st and 2nd	20
57'-0"	Bogie Thirds	44
57'-0"	Bogie Thirds, luggage and brakes	4
49'-0"	Bogie luggage Vans	3
49'-0"	Bogie Fruit Vans	3
24' 6"	Covered Motor Trucks	13
21'-6"	Passenger Brake Vans	4
22' 6"	Luggage Vans	4
	TOTAL	147
	Wagons.	
20'	Steel covered Wagons	1,373
20'	Wooden Horse Wagon	9
20'	Steel Low-sided Wagons	100
20'	Steel Ballast Wagons	137
43'	Steel Bogie High-sided (coal wagons)	14
43'	Steel Bogie Rail or Timber Wagons	25
18'	Oil Tank Wagons I. R. C. A. type	6
20'	Weighted Brake Vans (goods)	25
	TOTAL	1,689

Enclosure No. 3.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY—METRE GAUGE.

B.

Para. 3 (*a*).

Requirements since 1923-24 of each type of wagon and coach.

	Stock actually built and turned out		
	1923-24.	1924-25.	1925-26.
Coach.			
Family Firsts	3	...	...
Bogie Thirds	37	33	26
Bogie Thirds and Mail Vans	5	...	3
Bogie Thirds and Brake Vans	...	...	4
Bogie Fruit Vans	3	...	...
Covered Motor Trucks	5	3	5
Horse Vans	...	2	...
Brake Vans	...	...	4
Total	53	38	42
Wagon.			
Steel covered goods wagons 20′	*329	290	548
Steel low-sided wagons 20′	...	...	100
Wooden horse wagons 20′	9	...	...
Mineral oil tank wagons	6	...	...
Steel ballast wagons	40	46	...
Weighted brake vans	9	16	25
Bogie steel covered goods wagons	52	....	...
Bogie coal wagons	10	...	4
Bogie timber trucks	25	...	...
Bogie well truck	1	...	...
Total	481	352	677

* Include 150 wagons supplied by Messrs. Burn and Company.

Enclosure No. 4.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY—METRE GAUGE.

C.

Para. 3 (*b*).

Requirements in 1926-27.

	Number provided to be built.
Carriages.	
Family Firsts four-wheeled	16
Double „ „	4
„ Seconds „	10
Composites First and Seconds four-wheeled	10
Bogie Composites Firsts and Seconds	4
Bogie Thirds	31
Bogie Thirds and Brake Vans	6
Covered Motor Trucks	4
TOTAL	85
Wagons.	
Steel covered Goods Wagons	581
„ Low-sided „	50
Wooden Live Stocks „	19
Stores Delivery Vans	4
Kerosine Oil Van	1
Cell charging van for Electric Department	1
TOTAL	656

Enclosure No. 5.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY—METRE GAUGE.

D.

Para. 3(*c*).

Average requirements of each of the five years subsequent to 1926-27.

Type of vehicle.	Number provided in quinquennial Fore-cast during					Total for 5 years.	Average per year.
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.		
Coach.							
Bogie Tourist car (large)	...	...	1	1	...	2	...
Ditto (small)	...	...	1	...	...	1	...
Bogie Firsts do.	...	...	...	...	2	2	...
„ Composites First and Seconds.	4	4	4	4	5	21	4
Family Firsts	9	4	4	4	...	21	4
Double „	5	2	...	4	...	11	2
„ Seconds	9	17	4	4	6	40	8
Composites First and Seconds	7	9	7	4	...	27	6
Bogie Thirds	53	52	21	35	79	240	48
„ and brake vans	5	1	...	9	5	20	4
„ brake vans	...	...	6	...	...	6	1
Covered motor trucks	4	4	6	10	4	28	6
Articulated sentinel coach steam.	1	...	...	...	...	1	...
Total	97	93	54	75	101	420	83
Wagon.							
Weighted break vans 20′	...	...	12	23	22	57	11
Steel covered goods wagons 20′	430	370	430	390	470	2,090	418
Steel ballast wagons 20′	...	...	...	10	18	28	6
Wooden live stock wagons 20′	...	...	...	10	...	10	2
Bogie coal wagons 43′	...	20	...	20	20	60	12
Bogie Timber trucks 43′	...	...	...	3	...	3	1
Kerosine oil van	1	...	...	...	...	1	...
Total	431	390	442	456	530	2,249	450

Enclosure No. 6.

BOMBAY, BARODA AND CENTRAL INDIA RAILWAY—BROAD GAUGE.

H—3.

Question No. 3.

Year.	Bogie coaches bogie non-standard.	4-wheeler coaches non-standard.	Bogie coaches I. R. C. A. standard.	4-wheeler coaches I. R. C. A. standard.	Bogie wagons non-standard.	Bogie wagons I. R. C. A. standard.	Four-wheeler wagons I. R. C. A. standard.
1926-27	...	2	2	...	...	...	200
1927-28	...	...	4	...	...	...	2
1928-29	...	...	2	...	...	10	256
1929-30	...	...	4	6	...	...	254
1930-31	...	...	11	3	...	.	254
1931-32	...	1	16	3	...	10	133
TOTAL .	.	3	39	12	...	20	1,099

Enclosure No. 7.

STATEMENT I.

A statement of particulars of prices (B. G.) of the type of wagons and underframes purchased since 1922-23.

Serial No.	Indent No.	Description and quantity of the type of wagon and underframes indented for — Description	Quantity.	Price F.O.B. Port (in Sterling). £ s. d.	Freight and Insurance and Freight brokerage. £ s. d.	Total C.I.F. price (in rupees). Rs. a. p.	Rate of exchange at which converted — Varying — From	To	Customs duty in rupees. Rs. a. p.	Landing, Wharfage, etc., charges (in rupees). Rs. a. p.	Labour. Rs.	Stores. Rs.	Overhead charges. Rs.	Cost of erection. Rs.	Total in rupees. Rs. a. p.	Month and year of shipment.	Remarks.
1	B/1069 of 1921.	Steel open wagons I.R.C.A. type to specification No. 372, Drg. E/26.	76	23,458 10 0	2,185 7 4	3,95,698 1 0	1 3 5/32	1 3 13/32	40,425 5 0	4,625 14 0	8,034	2,986	730	11,700	4,52,559 4 0	Aug. 1923.	
2	B/1075 of 1921.	Steel covered wagons with 16 ton axles I.R.C.A. type to specification No. 370, Drg. S/23.	123	43,156 5 0	3,957 19 7	7,25,593 14 0	1 3 5/32	1 3 13/32	73,147 13 0	8,272 1 0	18,500	5,125	1,825	25,250	8,32,236 12 0	Apl., July and Aug. of 1922.	
3	Do.	Steel open wagons with 16 ton axles of I. R. C. A. type to specification No. 371, Drg. S/26.	109	33,025 0 0	3,176 19 6	5,56,825 13 0	1 3 5/32	1 3 13/32	56,235 2 0	7,725 15 0	10,300	3,700	1,000	15,000	6,35,496 14 0		
4	B/1085 of 1921.	Steel covered wagons with 16 tons axles of I.R.C.A. type to specification No. 379, Drg. S/23.	106	36,278 5 0	3,456 10 2	6,00,728 9 0	1 3 5/32	1 3 13/32	60,551 11 0	7,950 5 0	15,688	4,346	1,378	21,412	6,90,637 9 0	Apl. to July 1922.	
5	B/1106 of 1922.	Steel covered wagons with 16 ton axles of I.R.C.A. type to specification No. 388, S/23.	25	1,900 0 0 6,200 0 0	80 19 3 613 15 2	7,01,414 2 0 29,772 10 0	1 4 1/2	1 3 13/32	10,312 0 0 2,992 0 0	1,246 0 0 273 8 0	29,700	1,025	325	5,050	*5,050 0 0 1,13,372 2 0 33,042 2 0	Dec. 1922 to Apl. 1923.	* Total cost of erection.
6	Do.	Steel open wagons with 16 ton axles of I.R.C.A. type to specification No. 385, Drg. S/26.	109	30,300 0 0	2,765 9 3	4,91,039 13 0	1 3 13/32	1 4 1/2	49,762 12 0	6,438 7 0	10,300	3,700	1,000	15,000	5,62,241 0 0		
7	B/1139 of 1923.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. No. S/23 code A/2 complete with wheels and axles.	175	81,100 17 6	8,722 0 0	13,32,041 9 0	1 4 7/32	1 4 1/2	1,34,743 5 0	23,600 2 0	23,900	7,175	2,275	35,350			
8	Do.	Do. do.	25								3,700	1,025	325	5,050	15,45,765 0 0	Feb. to Oct. 1923.	
9	Do.	Steel open wagons with 16 ton axles of I.R.C.A. standard type Drg. S/23 code C/3 complete with wheels and axles.	100								10,300	3,700	1,000	15,000			
10	B/1154 of 1923.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. No. S/23 code A/2 complete with wheels and axles.	25	20,536 2 6	2,142 14 1	3,27,711 9 0	1 4 7/32	1 5 1/32	33,282 6 0	6,148 6 0	3,700	1,025	325	5,050	3,79,072 5 0	May 1923.	
11	Do.	Steel open wagons with 16 ton axles of I.R.C.A. standard type to Drg. S/26 code C/3 complete with wheels and axles.	59								5,150	1,850	500	7,500		May 1923 to Jan. 1924.	

A statement of particulars of prices (B. G.) of the type of wagons and underframes purchased since 1922-23—contd.

Serial No.	Indent No.	Description and quantity of the type of wagon and underframe indented for		Price F.O.B. Port (in Sterling).	Freight and Insurance and Freight brokerage.	Total C.I.F. price. (in rupees).	Rate of exchange at which converted.		Customs duty in rupees.	Landing, Wharfage, etc., charges (in rupees).	Labour.	Stores.	Overhead charges.	Cost of erection.	Total in rupees	Month and year of shipment.	Remarks.
							Varying.										
		Description.	Quantity.				From	To									
				£ s. d.	£ s. d.	Rs. a. p.	s. d.	s. d.	Rs. a. p.	Rs. a. p.	Rs.	Rs.	Rs.	Rs.	Rs. a. p.		
12	B/1158 of 1923.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. No. S/28 code A/3 complete with wheels and axles to specification No. 411.	135	36,787 10 0	2,636 4 9	5,60,143 9 0	1 4 1/8	...	56,318 13 0	11,959 15 0	19,980	5,535	1,755	27,470	6,55,692 5 0	May and June 1924	
13	B/1228 of 1924.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. S/28/1 code A/2 complete with wheels and axles to specification No. 415.	250	59,087 10 0	4,626 9 1	8,45,316 13 0	1 5 1/16	1 6 3/8	85,373 14 0	19,145 7 0	37,000	10,250	3,250	50,500	10,00,236 2 0	From April 1925 onwards a portion of these wagons is yet to arrive.	
14	B/1229 of 1924.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. S/28/1 code A/2 complete with wheels and axles to specification No. 416.	100	23,537 0 0	1,843 9 11	3,36,310 11 0	1 5 1/8	1 6 3/8	34,001 13 0	8,285 1 0	14,800	4,100	1,300	20,200	3,38,797 9 0	From May 1925 onwards a part is still to arrive.	
15	B/1255 of 1925.	Ballast wagon complete with wheels and axles to specification No. 432.	150	35,033 17 0	3,109 14 0	5,04,084 15 0	1 6 1/8	1 6 3/8	51,026 7 0	10,191 14 0	15,450	5,550	1,500	22,500	5,87,803 4 0	From Nov. 1925 onwards.	
16	B/1269 of 1925 & B/1273 of 1925.	Ballast wagons complete with wheels and axles to specification No. 431.	30 / 20	13,673 15 0	1,033 3 8	1,67,967 13 0	1 6 1/8	...	17,041 15 0	4,028 11 0	5150	1,850	500	7,500	1,96,538 7 0	Jan. to Mar. 1926.	
17	B/1273 of 1925.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. S/23/1 code A/2 complete with wheels and axles to specification No. 425.	200	47,575 0 0	3,420 0 0	6,78,052 12 0	1 6 1/16	...	68,606 2 0	10,835 0 0	29,600	8,200	2,600	40,400	7,97,695 14 0	Nov. 1925.	
18	Do.	Steel covered wagons with 16 ton axles of I.R.C.A. standard type Drg. S/28/1 code A/3 complete with wheels and axles to specification No 427.	70								10,360	2,870	910	14,140			
19	B/1274 of 1925.	Steel covered wagons with 16 ton axles I.R.C.A. standard type Drg. S/28/1 code A/3 complete with wheels and axles to specification No. 424.	100	61,341 17 6	4,457 8 2	8,69,773 12 0	1 6 3/8	...	88,006 0 0	14,165 0 0	14,800	4,100	1,300	20,200	10,21,434 12 0	Do.	
20	Do.	Steel covered wagons with 16 ton axles I.R.C.A. standard type Drg. S/28/1 code A/3 complete with wheels and axles to specification No. 426.	75								14,100	3,075	975	18,150			

Note.—Rome Inspection charges are not added to the costs of wagons shown in this statement.

Enclosure No. 8.

STATEMENT E.

Bombay, Baroda and Central India Railway—Metre Gauge.

Type and description of wagons and carriage underframe—Metre Gauge.	2'-0" steel covered wagon I. R. C. A. type H. A. 2 (not fitted with V. B.) 1925-26.			20'-0" steel low-sided wagon I. R. C. A. type M. C. 4 (not fitted with V. B.) 1925-26.			43'-0" Bogie high-sided open wagon I. R. C. A. type M. B, C. 1 1925-26.			56'-6" carriage underframe with bogies I. R. C. A. type 1925-26.			18' Oil Tank I. R. C. A. type M. J. 1 1923-24.			Bogie rail I. R. C. A. M. B. D. 1 1923-24.		
	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.
			Rs.			Rs.			Rs.			Rs.			Rs.			Rs.
1.—Materials.																		
State imported British Rolled sections Channels, angles, plates, flat and round bars, spring steel rivets, bolts.	Lot	...	1,250	...	...	880	...	...	2,600	...	...	4,400	...	...	1,408	...	...	...
astings Indian Fittings	Lot	...	389	...	...	332	...	...	533	...	...	800	...	...	891	...	...	...
Other material such as helical springs, door controllers, vacuum brake fittings.	Lot	...	120	..	...	40	...	...	266	...	...	894	...	...	292	...	...	...
Stores, painting and other miscellaneous.	Lot	..	80	...	...	54	...	..	180	...	...	63	..	...	91	...	...	...

Type and description of wagons and carriage underframe—Metre Gauge.	2'-0" steel covered wagon I. R. C. A. type H. A. 2 (not fitted with V. B.) 1925-26.			20'-0" steel low-sided wagon I. R. C. A. type H. C. 4 (not fitted with V. B.) 1925-26.			43'-0" Bogie high-sided open wagon I. R. C. A. type M. B. C. 1 1925-26.			56'-6" carriage underframe with bogie I. R. C. A. type 1925-26.			18' Oil Tank I. R. C. A. type M. J. 1 1923-24.			Bogie rail I. R. C. A. M. B. D. 1 1923-24.		
	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.	Weight.	Rate.	Value.
			Rs.			Rs.			Rs.			Rs.			Rs.			Rs.
2.—Cost above material.																		
Power	...	...	90	...	...	90	...	...	139	...	..	400	...	...	314	...	...	...
Fuel	.	...	47	...	...	43	...	...	61	...	...	10	..	...	71	...	...	...
Labour	...	..	379	...	...	333	...	...	740	...	...	800	...	...	1,042	...	...	...
Repairs to machinery . .	...	...	66	...	...	55	...	...	139	...	...	343	...	...	485	...	...	...
General Works Supervision .	...	...	164	...	...	145	...	...	288	...	...	440	...	...	329	...	...	...
Net cost per unit of output excluding wheels and axles.	...	...	2,585	...	...	1,972	...	..	4,046	...	...	5,240	...	..	7,933	...	...	...
Total No. of units turned out in the year.	..	...	548	...	...	100	...	.	4	...	...	26	...	...	6	...	...	...
Wheels and axles imported .	2 pairs.	..	458	2 pairs.	...	454	4 pairs.	...	923	4 pairs.	...	900	2 pairs.	...	692	4 pairs	...	...

Enclosure No. 19.

STATEMENT F.

Bombay, Baroda and Central India Railway—Metre Gauge.

Home Indent No.	Description of material.	Quantity.	F.O.B. rate.	Amount F.O.B.	Date of delivery F.O.B.	Date of shipment.	Contractor's name.
			£ s. d.	£ s.			
M. 1065—21	Wheels and Axles 2'-4½" dia. on tread with journal 7" × 4".	16	17 16 5 per pr.	2,852 8	5th Sep. 1921 . 16th Dec. 1921 .	Feb. 1922 .	Bochumer Verein.
M. 1067—21	Ditto ditto . .	480	17 16 5 ,,	8,554 0	16th Dec. 1921 .	Feb., Mar. and May 1922.	Do.
M. 1077—21	Ditto ditto . .	664	19 7 9 ,,	12,875 0	2nd Jan. 1922 .	Mar. 1922 .	W. Beadmore & Co. Ltd.
M. 1084—21	2'-4" 7" × 3½" .	*40	25 5 0 ,,	...	...	...	...
M. 1088—21	Ditto ditto . .	32	20 5 0 ,,	648 0	10th April 1922 .	June 1922 . .	Fried Krupp A. G.
M. 1116—22	Ditto 7" × 4" .	80	19 0 0 ,,	1,520 0	8th Jan. 1923 .	Jan./Mar. 1923 .	Hurat Nelson & Co., Ltd.
M. 1117—22	Ditto ditto . .	90	19 0 0 ,,	1,710 0	Do. .	Feb./Mar. 1923 .	Do.
M. 1118—22	Ditto ditto . .	16	19 0 0 ,,	304 0	Do. .	Feb. 1923 . .	Do.
M. 1137—23	Ditto 7" × 3½" .	168	21 5 0 ,,	3,570 0	1st June 1923 .	July 1923 . .	Nowlay Wheel Co., Ltd.
M. 1141—23	Ditto 7" × 4" .	220	21 7 6 ,,	4,702 10	14th Jan. 1923 .	Oct. 1923/Jan. 1924.	Railway Carriage and Wagon.
M. 1191—24	Ditto ditto . .	72	17 17 6 ,,	999 0	24th July 1924 .	Oct. 1924 . .	Bochum Verein.

Home Indent No.	Description of material.	Quantity.	F.O.B. rate.	Amount F.O.B.	Date of delivery F.O.B.	Date of shipment.	Contractor's name.
			£ s. d. per	£ s.			
M. 1194—24	Wheels and Axles 2'-4½" dia. on tread with journal 7" × 4".	272	13 17 6 pr.	3,774 0	22nd Sep. 1924 .	Nov. 1924 . .	Bochum Verein.
B. 1209—24	Ditto 7" × 3½" .	300	13 14 3 ,,	4,113 15	23rd Oct. 1924 .	Dec. 1924 . .	Fried Krupp & Co.
M. 1207—24	Ditto 7" × 4" .	150	14 15 6 ,,	2,216 5	13th Jan. 1925 .	Mar./Apl. 1925 .	Henschel & Sohan G. H. B.
M. 1208—24	Ditto ditto . .	100	14 15 6 ,,	1,477 10	Do. .	Apl./May 1925 .	Do.
M. 1218—24	2'-4½" ditto . .	50	11 1 0 ,,	552 10	19th Jan. 1925	May 1925 . .	Devtsch Luxemburgischi Bergwerksund Hutten A. G.
M. 1219—24	Ditto ditto . .	106	11 1 0 ,,	1,171 6	Do. .	May/June 1925 .	Do.
M. 1220—24	2'-4" ditto . . .	34	11 1 0 ,,	375 14	Do. .	June 1925 .	Do.
M. 1230—24	Ditto ditto . . .	32	15 10 0 ,,	496 0	19th Mar. 1925 .	May 1925 . .	Henschel & Sohan G. H. B.
M. 1252—25	Ditto ditto . .	50	14 16 0 ,,	715 0	11th June 1925 .	Sep. 1925 . .	Skoda W. K. S. Plyon.
M. 1253—25	2'-4" 7" × 3½" .	150	13 18 0 ,,	3,475 0	16th July 1925 .	Aug./Sep. 1925 .	Bohmer Beraise.
M. 1253—25	2'-4½" 7" × 4" .	100					
M. 1253—25	2'-4" 7" × 3½" .	150	16 15 6 ,,	2,512 10	Do. .	Sep. 1925 . .	Harrison Camm Ltd. (Sandberg Sorbitic).

Enclosure No. 10.

SUMMARY.

Year.	British.	Continental.	Total.	Average weight per set of 4-wheel wagon.	Average price per set.	Remarks.
				T. C. Qr. lb.	*Rs. a. p.*	
1922-23	528	890	1,418	1 1 2 10	636 8 0	
1923-24	388	...	388	1 1 2 10	414 4 0	* Sandberg Sorbitic.
1924-25	...	644	644	1 1 2 10	416 10 0	
1925-26	150*	772	922	1 1 2 10	388 0 0	Not possible to distinguish the country of origin.

Year.	*British.*	*Continental.*
1922-23	£19-0-0 to 19-7-6	£17-16-5 to 20-5-0 per pair.
1923-24	£21-5-0 to 21-7-6	.....
1924-25	.....	£13-14-3 to 13-17-6 ,,
1925-26	£16-15-6	£11-1-0 to 15-10-0 ,,

Enclosure No. 11.

STATEMENT II.

Summary of the statement of quantities, weight and price of wheels and axles purchased for each year from 1922-23 to 1925-26.

Serial number.	Year during which purchased.	BROAD GAUGE.						METRE GAUGE.						Remarks.
		Quantity (in Pairs).	Weight.				Price C. I. F. in Sterling.	Quantity (in Pairs).	Weight.				Price C.I.F. in Sterling.	
			T.	Cwt.	Q.	lb.	£ s. d.		T.	Cwt.	Q.	lb.	£ s. d.	
(1)	1922-23 .	1,119	1,782	16	0	18	61,273 7 6 or 54 15 2 per pair of 2 wheels+1 axle.	294	149	17	0	23	5,675 18 6 or 19 6 2 per pair of 2 wheels+1 axle.	
(2)	1923-24 .	1,052	1,388	5	2	1	44,121 13 10 or 41 18 10 per pair of 2 wheels+1 axle.	490	275	7	0	12	10,928 15 5 or 22 6 1 per pair of 2 wheels+1 axle.	
(3)	1924-25 .	454	593	1	3	10	17,229 9 1 or 37 19 0 per pair of 2 wheels+1 axle.	754	404	12	0	11	10,939 7 7 or 14 10 2 per pair of 2 wheels+1 axle.	
(4)	1925-26 .	1,829	2,415	0	1	13	45,161 12 8 or 24 13 10 per pair of 2 wheels+1 axle.	862	469	1	2	13	13,080 7 3 or 15 3 6 per pair of 2 wheels+1 axle.	

Enclosure No. 12.

A list of firms who have supplied wheels and axles to the B., B. and C. I. Railway since 1922-23.

*	Messrs.	F. Krupps.
	,,	The Teesside Bridge and Engineering Works Ltd.
*	,,	Hurst Nelson & Co.
*	,,	Rheiniche Metalwairein & Maschinifabrik.
	,,	Harrison & Camm Ltd.
	,,	Nevlay Wheels Co., Ltd.
	,,	Cravens Rly. Carr. & Wagon Co., Ltd.
*	,,	The Skoda Works Itzen.
	,,	Wm. Bardmore & Co., Ltd.
*	,,	Ltd. Co., formerly Skoda Works.
*	,,	Bochum Verein.
*	,,	Bachumer Verein.
*	,,	Fried Krupp A. G.
*	,,	Henschel & Sohn G. M. B. H.
*	,,	Devtsch Luxemburgischi, Bergwerksund Hutten A. G.
*	,,	Henschel & Sohn G. M. B. H.
*	,,	Uwnesetaicenes de Eeigneies.
	,,	Leeds Forge Co., Ltd.
*	,,	Skoda Works.
*	,,	Harrison Camm.
*	,,	Bochumer Verein.
*	,,	J. O'Hara Murray.
	,,	Owen & Dyson Ltd. (Rotherham).
	,,	John Baker & Co.
	,,	Chas. Roberts & Co.
	,,	J. Baker & Co. (Rotherham).

* Continental suppliers are marked with asterisk.

(2) *Letter from the Bombay, Baroda and Central India Railway Company, dated the 21st July 1926.*

With reference to the replies to the questionnaire sent to the Tariff Board *vide* my letter 8th July 1926, I would draw your attention to the fact that customs duty charges shewn in each of the statements accompanying my above letters, though paid by the Railway Company during the years 1921-22, 1922-23 and 1923-24, were refunded to this Railway subsequently at the time when it was decided that stores imported by the Railway Company were to be considered as stores belonging to the Government and as such not liable to customs duty.

As the amounts of duty refunded have not been posted in our Audit books, I have left the customs charges as originally paid by this Railway in the statements referred to above.

(3) *Letter from the Bombay, Baroda and Central India Railway Company, dated the 16th September 1926.*

In continuation of this office No. T.-219-C.-2, dated 8th July 1926, I beg to enclose a copy of letter No. 393, dated 13th August 1926, from Messrs. Rendel, Palmer and Tritton, the Company's Consulting Engineers, London, containing their remarks on certain points in the questionnaire which could not be replied to by this office.

Copy of letter No. 393, dated 13th August 1926, from the Consulting Engineers (Messrs. Rendel, Palmer and Tritton), London, to the Secretary, Bombay, Baroda and Central India Railway Company, London (received under letter's No. 262 of 26th August 1926).

INDIAN TARIFF BOARD'S QUESTIONNAIRE.

Referring to your letter No. 373 of 5th August 1926, and in continuation of our letter of 9th August, we have now to make a few remarks on the points which could not be fully answered by your Agent.

Query 2.—Progress of standardization.—The standardization of wagons and coaches is now being proceeded with and new and revised designs are being made by the Consulting Engineers in accordance with the recommendation of the Carriage and Wagon Standards Committee in India, 1925. These vehicles are called " I. R. S." patterns. The number of types will be reduced, and all are designed to take a central automatic coupler. When completed, the Bombay, Baroda and Central India Railway Company are prepared to order these types except for special purposes.

Query 9.—(a) The answer we conclude to this is, that in accordance with instructions received by the Government through the Government Director, and in order to buy to the best advantage, tenders are obtained from the widest source and Continental wheels and axles of *equal quality* to British have been ordered when prices and delivery were favourable.

Query 9.—(b) Tests and inspection of Continental wheels and axles.—We should like to take exception to the suggestion that Continental wheels and axles are made without specification or proper inspection, and we wish to place on record that there is no *difference whatever* in the specification and quality of the steel, the method of taking the tests (the test pieces are sent over here to the National Physical Laboratory) or the workmanship, etc., and that the materials and workmanship are inspected throughout in exactly the same way as British made wheels and axles.

Query 11.—We do not at present consider basic open hearth steel suitable for the wheels and axles used on Indian Railways, where the same wheels and axles are used for both goods and coaching stock and upon which life and limb depend. This matter was carefully considered by the British Engineering Standards Association, on whose committees the best experts in the country, both on the consultant and engineering sides, are sitting. The lower grade specification, without analysis and admitting open hearth basic steel, was included in the British Engineering Standards Association Specifications for tyres, axles and spring steel to meet a demand by export traders for the articles for use in contractors' locomotives and wagons, traders' wagons and such like and was not intended for main line work such as that of Indian Railways. In reply to a somewhat similar question, the following technical reply was made:—

> "The acid open hearth process requires the use of selected raw materials low in phosphorus and sulphur, and is therefore desirable as an additional safeguard when important parts are concerned.
>
> "Good steel can be produced by the basic open hearth process from raw materials containing high percentages of phosphorus and sulphur but as the limit of the impurities in the raw materials is widened, the certainty of good results in the final product is lessened, and chances of error are increased.
>
> "The thermo-chemical reactions in the two processes, though somewhat similar, are not identical, and affect differently the physical properties of the steel, as is shown by the varying results obtained from the physical tests upon materials made by the two processes, the chemical analysis of which nevertheless agrees in their final composition."

4. BURMA RAILWAYS COMPANY, LIMITED.

Letter, dated the 12th July 1926.

I forward my replies (so far as I am able to furnish them) to the following questionnaires :—

* * * * * * * *

(*d*) Wagons (received with your letter No. 307, dated the 29th May 1926).

* * * * * * * *

2. Where views are expressed they are not necessarily those of my Home Board.

3. A copy goes to the Railway Board.

Replies to Tariff Board's letter No. 307 of 29th May 1926.

WAGONS AND COACHES.

1. Wagons 9,713, Carriages 1,163. The only I. R. C. A. items are 1,672 M. A. I. covered wagons which are proving very unsuitable for Burma climate.

2. So far no standard coaching stock have been provided. The original designs were not approved and new ones are not yet available.

As regards wagons the I. R. C. A. wagons are not suitable and wooden wagons are used. It is not contemplated to adopt I. R. C. A. designs but I. R. C. A. details will be used where suitable. We have reduced our future stock to one standard of each kind and one underframe is standard for all 4-wheeled wagons, another for all bogie wagons, and a third for all bogie carriages.

3. If this refers only to I. R. C. A. standards the answer is *nil*. The following new stock have been put on the line :—

(*a*) 1923-24	Coaching	4-wheelers, upper class	5	3rd class	19
		Bogies	7		6
	Goods	4-wheelers	1,116		
		Bogies	80		
1924-25	Coaching	4-wheelers, upper class	0	3rd class	0
		Bogies	5		18
	Goods	4-wheelers	202		
		Bogies	20		
(*b*) 1925-26	Coaching	4-wheelers, upper class	0	3rd class	0
		Bogies	12		15
	Goods	4-wheelers	1,191		
		Bogies	74		
(*c*) 1926-27	Coaching	Bogies, upper class	13	3rd class	64
	Wagons	4-wheelers	311		
		Bogies	229		
1927-28	Coaching	Bogies, upper class	8	3rd class	92
1928-29			6		66
1929-30			6		52
1927-28	Goods	4-wheelers	444	Bogies	50
1928-29			308		0
1929-30			308		0

No programme for later years.

6. We have not hitherto built carriage underframes in our own workshops except odd special ones but we intend doing so hereafter. Our wagons being of timber are built here.

5. EASTERN BENGAL RAILWAY.

Letter, dated the 19th June 1926.

With reference to your letter No. 307, dated the 29th May 1926, I enclose herewith a statement containing the information required by the Tariff Board on questions concerning wagons, etc.

Replies to questionnaire by the Tariff Board concerning wagons, etc.

1.

Coaching Stock on 31st May 1926.

	No. on line.	No. of main types.
Broad gauge.		
Four-wheeled	336	302
Six-wheeled	—	—
Bogie	503	372
Metre Gauge.		
Four-wheeled	466	376
Six-wheeled	78	67
Bogie	503	433

Goods Stock.

Broad Gauge.		
Four-wheeled	8,561	4,097
Six-wheeled	12	—
Bogie	77	77
Metre Gauge.		
Four-wheeled	3,434	1,990
Six-wheeled	64	—
Bogie	77	77

3. (*a*) Stock provided in the Programme for 1923-24—*Broad Gauge*:—

Coaching Stock.

Nil.

Goods.

	Additions.
A-3 type wagons	50

PROGRAMME FOR 1924-25.

Coaching Stock.

	Additions.	Replacements.
Broad Gauge.		
1st, 2nd and Inter Bogie	—	1
1st and 2nd Class Bogie	7	3
Inter and 3rd Class Bogie	4	7
3rd Class Bogie	6	11
3rd and Brake	—	2
3rd, Luggage and Brake Bogie	6	6
Horse Boxes	—	12
TOTAL	23	42

Goods Stock.

Nil.

PROGRAMME FOR 1925-26.

Coaching Stock.

	Additions.	Replacements.
Broad Gauge.		
1st, 2nd and Inter Bogie	3	—
1st and 2nd Class Bogie	—	2
Inter and 3rd Class Bogie	3	2
3rd Class Bogie	6	3
3rd and Brake Bogie	6	6
Luggage Van, 4-wheeler	—	20
TOTAL	18	33

Goods Stock.

Nil.

Stock provided in 1923-24, 1924-25, 1925-26 :—

Addtions and Replacements.

Metre Gauge.

Coaching Stock . . . . . *Nil.*

Goods Stock . . . . . *Nil.*

3. (*b*) No. and description of coaches provides in 1926-27 programme :—

Coaching Stock.

	Additions.	Replacements.
Broad Gauge.		
1st, 2nd and Inter Bogie	3	—
1st and 2nd Class Bogie	4	2
Inter and 3rd Class Bogie (through service)	5	2
Inter and 3rd Class Bogie (lateral)	9	3
3rd and Brake Bogie	6	—
Luggage Vans, 4-wheelers	—	22
Tourist Car Bogie	—	1
Smoking Saloon Bogie	—	1
Luggage Vans Bogie	—	2
Tourist Car, 4-wheeler	—	2
Ambulance Van	—	1
TOTAL	27	36

Metre Gauge.—Nil.

Goods Stock.

Broad Gauge.		
Relief Train, *viz.*, 3 Tools Vans, 1 Brake and Staff and 1 Luggage and Brake	5	—
Timber Truck Bogie	—	50
Boiler Truck Bogie	—	1
Special Stock (Test Wagon)	—	1
TOTAL	5	52

	Additions.	Replacements.
Metre Gauge.		
Timber Trucks Bogie	—	25
Boiler Truck Bogie	—	1
Special Stock	—	4
	—	—
TOTAL .	—	30

6. We do not build wagon or carriage underframes in our workshops.

7 and 8. Please see statement attached.

10. These have not been sufficiently long in service to enable this Administration to form an opinion. So far they have given no trouble.

Statement showing f. o. b. Prices, Freight, etc., of Wheels and Axles purchased in 1922-23 to 1925-26.

Size of wheels and journal.	Quantity.	Country of origin.	F. o. b. prices.	Approximate weight of each.	Freight charges.	Port charges including landing, etc.	Customs duty.
1922-23.	Pairs.		£ s. d.	T. Cwt. Qr.	£ s. d.	Rs. A. P.	Rs. A. P.
10″ × 5″	52	British	4,132 0 0	1 3 0	172 18 8	175 0 0	*Nil.*
10″ × 5″	100	Do.	4,300 0 0	1 3 0	332 16 11	313 14 0	,,
10″ × 5″	60	German	2,250 0 0	1 3 0	87 11 11	195 6 0	,,
7″ × 4″	12	Do.	241 10 0	0 11 3	16 3 1	16 0 0	,,
10″ × 5″	23	Do.	414 0 0	1 3 0	31 1 0	74 0 0	,,
10″ × 5½″	8	Do.	144 0 0	1 5 0	13 0 0	24 0 0	,,
10″ × 4½″	30	Do.	540 0 0	1 0 0	39 16 0	95 0 0	,,
9″ × 4½″	200	Do.	3,600 0 0	0 18 0	270 0 0	625 0 0	,,
10″ × 5″	40	Do.	1,720 0 0	1 3 0	54 0 0	130 0 0	,,
7″ × 4″	80	Do.	1,690 0 0	0 11 3	92 0 0	100 0 0	,,
1923-24.							
10″ × 5½″	260	British	10,611 11 6	1 5 0	870 17 0	845 0 0	*Nil.*
10″ × 5½″	100	Do.	4,081 7 6	1 5 0	335 18 9	326 0 0	,,
10″ × 5½″	100	Do.	3,912 10 0	1 5 0	332 14 2	325 0 0	,,
7″ × 4″	12	German	261 0 0	0 11 3	16 4 0	15 0 0	,,
1924-25.							
10″ × 5″	212	German	4,642 16 0	1 3 0	277 11 0	729 4 0	6,837 10 0
1925-26.							
10″ × 5½″	28	German	609 0 0	1 5 0	64 15 0	104 0 0	906 14 0
10″ × 5½″	72	Do.	1,596 0 0	1 8 0	166 9 9	262 0 0	2,319 2 0
10″ × 5″	1,000 Nos.	Do.	14,300 0 0	1 3 0	788 13 10	1,248 8 0	10,625 10 0

6. EAST INDIAN RAILWAY.

Letter, dated the 21st June 1926, giving replies to questionnaire concerning wagons.

With reference to letter No. 307, dated 29th May 1926, regarding the questionnaire concerning wagons, I beg to reply as follows :—

1. Total number of coaches and wagons on 31st March 1926 is as follows :—

Coaches—	
Bogies	1,764
Four-wheelers	2,044
Wagons—	
Bogies	381
Four-wheelers	54,887

Types of the stock are stated in the enclosed statement.*

3. (*b*) Requirements during the current financial year are also stated in the statement referred to above.

6. Wagons or carriage underframes are not built in the Railway workshops. They are either purchased locally from Contractors or obtained on indent through the Director General, London.

7 and 8. See the Railway Board's reply to paragraph 4.

10. Quite satisfactory if inspected by the Consulting Engineers to the Government of India.

The Railway Board in the enclosed copy of their letter No. 3450-S., dated 8th June 1926, state that they will answer questions 2, 3 (*c*), 4, 5, 9 and 11 to 15 on behalf of the State-worked Railways.

Copy of letter No. 3450-S., dated 8th June 1926, from the Secretary, Railway Board, to the Agent, E. I. Railway, Calcutta.

With reference to Tariff Board's questionnaire regarding wagons, I am directed to inform you that the Secretary, Tariff Board, is being advised that the Railway Board will answer questions 2, 3 (*c*), 4, 5, 9 and 11 to 15 on behalf of the State-worked Railways. The above questions should, therefore, not be answered by you.

2. I am to add that a copy of your replies to the Tariff Board to the questionnaires on—

(*i*) rails and fishplates,

(*ii*) materials, other than rails,

(*iii*) steel castings from locomotives, wagons and carriages, and

(*iv*) wagons,

may also be furnished to the Railway Board at an early date.

---

* Not printed.

7. GREAT INDIAN PENINSULA RAILWAY.

Letter, dated the 17th June 1926.

With reference to your letter No. 307, dated the 29th May 1926, herewith six copies of my answers to the questionnaire regarding wagons, etc.

2. In this connection I extract below from the Railway Board's No. 3450-S. of the 8th June 1926 to me—

> "With reference to Tariff Board's questionnaire regarding wagons, I am directed to inform you that the Secretary, Tariff Board, is being advised that the Railway Board will answer questions 2, 3 (*c*), 4, 5, 9 and 11 to 15 on behalf of the State-worked Railways. The above questions should, therefore, not be answered by you."

Answers to questionnaire issued by the Tariff Board with their No. 307, dated the 29th May 1926.

1.

		Wagons.	Coaches.
Broad Gauge	Bogies	1,686	1,242
	4-wheelers	19,497	1,353
Metre Gauge	Bogies	*Nil.*	*Nil.*
	4-wheelers	*Nil.*	*Nil.*
Narrow Gauge	Bogies	174	42
	4-wheelers	39	7

Of the above, 20,332 wagons and 2,231 coaches are of the main type.

2. Railway Board will answer this.

3. (*a*) Our requirements since 1923-24 have been as under :—

	1923-24.		1924-25.		1925-26.	
	Goods.	Coaching.	Goods.	Coaching.	Goods.	Coaching.
Bogies	207	*Nil.*	7	101	*Nil.*	100
4-wheelers	1,025	*Nil.*	1,300	72	800	2

(*b*) Our requirements for 1926-27 are :—

	Goods	*Coaching.*
Bogies	*Nil.*	106
4-wheelers	877	4

4. Railway Board will answer this.

5. Railway Board will answer this.

6. Only a few underframes have been built in the past.

7. *The total quantities of wheels and axles, total weight* and price per set (that is, per 4-wheeled wagon or coach set) is as follows :—

——	Year.	Total Quantity.	Total Weight.	Price per set.
		Pairs.	Tons.	£ s. d.
British	1922-23	2,482	3,227	76 18 0
	1923-24	2,212	2,876	79 14 0
	1924-25	1,926	2,504	61 6 0
	1925-26	2,120	2,756	55 9 0
Continental (Germany).	1922-23	400	520	62 19 2
	1923-24	*Nil.*	...	...
	1924-25	*Nil.*	...	...
	1925-26	134	174	44 18 0

8. The prices quoted above are all f. o. b. I regret I am unable to state charges for freight, landing, etc., separately. 10 per cent. is usually allowed to cover freight and insurance but does not include customs and landing charges, customs being 10 per cent. *ad valorem*.

9. Railway Board will answer this.

10. Satisfactory.

11, 12, 13, 14 and 15. Railway Board will answer these.

8. MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

(1) *Letter, dated the 28th June 1926.*

Referring to your letter No. 307, dated the 29th May 1926, I have the honour to forward herewith a copy of my reply to the questionnaire sent therewith, together with 5 spare copies.

Questionnaire regarding Wagons.

1. The total number of wagons and coaches used by this Railway:—

	B. G.	M. G.
(*a*) Wagons (including Goods Brake Vans) .	6,111	7,540
(*b*) Coaches	966	1,155

2. We work entirely to I. R. C. A. Construction and design.

3. (*b*) and (*c*) Our requirements in 1926-27 and in the next 5 years are:—

Description of stock.	Requirements.											
	1926-27.		1927-28.		1928-29.		1929-30.		1930-31.		1931-32.	
	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.
					Broad Gauge.							
Coaching stock.												
Bogie III with brake and Luggage Compts.	4	3	2	14	2	6	..	9	..	..	..	..
Bogie III with a Guard Compt. and a Luggage Compt.	2	..	..	..	..	..	..	..	..	..	..	..
Covered Motor Carr. Trucks	3	1	..	..	..	..	..	..	..	..	..	..
Bogie III	3	7	3	..	9	5	..	..	..	20	..	8
Bogie Composites, I, II and III	..	2	..	2	3	2	..	2	..	10	..	..
Inspection Carriages Ordy.	..	3	..	..	..	..	..	..	..	3	..	1
Luggage Van	..	1	..	..	..	1	..	1	..	27	..	..
Tool or Inspectors Vans	..	2	..	..	..	..	..	..	..	..	..	..
Bogie I class	..	..	..	..	..	1	..	1	..	..	..	..
Bogie II class.	..	..	..	..	..	..	..	2	..	..	..	..
Bogie Composites *I* and *II*	..	..	..	..	..	..	..	1	..	..	..	..

Bogie Inter and III	..	..	...	3	...	...	..	4	..	..	..	3
Covered Carr. Trucks	..	..	..	..	..	4	..	..	..	..	..	..
Horse Boxes	..	..	..	..	..	..	..	..	..	..	..	2
Goods Stock.												
Covered goods wagons ordinary A. 2 type	..	..	..	..	100	..	100	86	70	184	..	..
Goods Brake Vans	..	..	..	..	..	13	..	9	..	..	..	2
Tool Vans	..	..	..	..	..	..	..	2	..	..	..	..
Cattle wagons ordinary B. 1 type	..	..	..	..	..	190	..	207	..	..	..	..
Open goods wagons Ordy. C. 2 type	..	..	..	..	..	142	..	40	..	116	..	4
Open goods wagons Bogie B. C. 1 type	..	..	..	..	..	50	..	50	..	..	..	..
Bogie rail truck B. D. 1 type	..	..	..	..	..	1	..	..	..	..	..	..
Powder Van X type	..	..	..	..	..	1	..	..	..	..	..	..
Coaching stock.	METRE GAUGE (M.S.M., M.S.R. AND W.I.P. RY.)											
Luggage vans.	12	..	4	5	1	..	..	..	..	..	..	..
Horse box	..	..	..	1	..	6	..	3	..	..	..	..
Inspection Carriages Ordy.	2	..	2	..	..	..	..	1	..	..	..	..
Bogie III	..	21	..	4	4	10	..	3	..	..	..	2
Covered Carriage Motor Trucks	..	2	..	..	..	..	..	..	..	..	..	..

Description of stock.	Requirements.											
	1926-27.		1927-28.		1928-29.		1929-30		1930-31.		1931-32.	
	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.	Additions.	Renewals.
Bogie Composites I, II and III	..	..	..	..	3	..	..	..	..	1	..	..
Bogie Inter and III	..	..	3	..	..	..	..	..	2	..	..	..
Carriage Trucks	..	..	..	2	..	..	..	..	7	..	..	1
Bogie Composites I and II	..	..	..	1	..	..	..	3	..	..	..	..
Bogie III with brake and luggage compartments	..	..	..	16	..	17	..	..	..	..	..	..
Goods Stock.												
Goods Brake Vans	11	20	10	13	10	1	..	1	..	1	..	2
Covered Goods wagons ordinary M. A. 1 type	112	225	..	230	95	90	..	1	..	121	..	427
Petrol tank wagons, M. B. K. 1 type	5	..	..	..	..	..	..	..	..	..	..	..
Open goods wagons ordinary M. C. 1 type	..	98	..	187	..	3	..	30	..	94	..	1
Ditto M. C. 3 type	..	136	..	33	..	..	..	..	..	..	..	57
Timber trucks	..	3	..	8	..	7	..	..	..	..	..	..
Steam Travelling Cranes 20 tons	..	4	..	..	..	..	..	..	..	..	..	..

| | | |

4. and 5. We know nothing of tender prices or purchases.

The only information we can supply is the number of wagons and underframes delivered to us year by year from 1922:—

(1) England
(2) America
(3) Continental
(4) India.

A sketch is attached giving particulars of these details for B. G. and M. G. marked A.

6. No, we do not build wagons or underframes.

7. This information is given on the sketch for B. G. and M. G. and marked "B".

8. The sterling F.O.B. prices charges for freight, etc., on both British and Continental wheels and axles per pair is:—

	B. G. Wheels and Axles.		M. G. Wheels and Axles.	
	British.	Continental.	British.	Continental.
Sterling f.o.b. price	£30-15-0 Liverpool.	£37-14-0 Antwerp.	£17-10-0 Glasgow.	£20-0-0 Antwerp.
Ocean freight	£2-7-6	£1-13-0	£0-19-0	£0-11-7
Insurance	£0-1-11	£0-2-8	£0-1-0	£0-1-4
Customs duty	Rs. 44-15-0	Rs. 59-14-0	Rs. 24-15-0	E
Port Trust Landing Charges, etc.	Rs. 10-15-0	Rs. 10-14-0	Rs. 3-6-0	Rs. 3-1-0

9. (*a*) We have no control over this.

(*b*) Specifications are prepared and watched during manufacture by Consulting Engineers in England.

10. Dartmunder Union axles obtained under Contract 854 in 1913 and 1914 were unsatisfactory in service. A number have failed generally after a bearing has run hot. It is understood that the steel was not properly heat treated after manufacture.

11. Unable to reply to this.

12. The annual Capital and Revenue expenditure of this Railway would have been increased during the following years as under:—

	Per cent.
1922-23	0·93
1923-24	0·04
1924-25	0·12
1925-26	0·16

13. No. I do not consider the industry has reached such a point.

List of defects rectified by this Company in M. A. 1 type wagons supplied by Messrs. Jessop & Co., Calcutta.

I. 1. Axle guards removed reset and rivetted up.
2. Buffer sockets refitted and fitted with washers and pins.
3. Brake racks were reset to work the lever face.
4. Wagons were lifted.
5. Train pipes were rejointed.
6. Rubber coupling washers and coupling cotters were replaced to hose pipes.
7. Axle guard holes rectified in sole bars.
8. Loose rivets were taken out and re-rivetted.
9. Double brake gear removed and refitted.
10. New dust shields were ordered on Paint Shop as those supplied were received broken.

II. The roofing of the B type wagons supplied by Messrs. Burn & Co. proved a failure and the same had to be replaced.

14. We are entirely under Railway Boards control.

15. This is done through Home Board through Consulting Engineers at Home who call for tenders arrange contracts and deliver the goods.

A.

Broad Gauge.

Wagons and Underframes delivered from April 1922 to date.

Year.	Where purchased.	No.	Description.	Contract No.	Price each.	Contractor.
					£ s. d.	
1922		100	Covered Goods Wagons, A/2 type . .	279 of 1922	229 15 0	P. & W. MacLellan, Ltd., Glasgow.
		11	Bogie Underframes, 67'-0" long . .	324 of 1922	573 0 0	Clayton Wagon, Ltd., Lincoln.
		1	Underframe, 19'-6" long	325 of 1922	271 0 0	Stableford & Co., Ltd., Coalville, Leicester.
		5	Underframes, 27'-0" long . . .	Do.	204 0 0	Do. do.
1923		2	Steam Yard Cranes, 5 tons . . .	629 of 1923	1,900 0 0	J. Booth & Bros., Ltd., Rodley, Leeds.
		1	Hand power Travelling Crane, 15 tons .	Do.	1,265 0 0	Do. do.
		12	Petrol Tank Wagons, K/1 type . .	708 of 1923	521 12 6	The Birmingham Railway Carriage and Wagon Co., Ltd.
		16	Underframes, 27'-0" long . . .	745 of 1923	182 0 0	R. T. Pickering Co., Railway Carriage and Wagon, Wisham.
		50	Covered Goods Wagons, A/2 type . .	740 of 1923	200 0 0	Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		4	Explosives Vans, X type . . .	Do.	290 0 0	Do. do.
		3	Oil Tank Wagons, J/1 type . . .	747 of 1923	375 0 0	Hurst Nelson & Co., Ltd., Motherwell.
		10	Bogie Open Wagons, B.C./1 type . .	748 of 1923	474 5 0	Gloucester Railway Carriage and Wagon Co., Ltd.
	British . .	7	Bogie Rail Wagons, B.D./1 type . .	Do.	445 5 0	Do. do.
		34	Bogie Underframes, 67'-0" long . .	764 of 1923	532 14 6	The Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		4	Bogie Underframes, 67'-0" long . .	Do.	537 14 6	Do. do.
		25	Underframes, 19'-6" long . . .	Do.	162 10 6	Do. do.

1924		2	Bogie Well Wagons	835 of 1	650 0 0	Hurst Nelson & Co., Ltd., Motherwell.
		150	Covered Goods Wagons, A/2 type	919 of 1923	209 15 0	The Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		12	Bogie Underframes, 67'-0" long	958 of 1924	595 0 0	Do. do.
		3	Underframes, 27'-0" long	1067 of 1924	276 0 0	Stapleford & Co., Ltd., Coalville, Leicester
		100	Covered Goods Wagons, A/2 type	1136 of 1924	198 10 0	The Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		100	Open Goods Wagons, C/2 type	Do.	191 10 0	Do. do.
		3	Bogie Underframes 67'-0" long	1179 of 1924	583 15 0	Cammell Laird & Co., Ltd., Nottingham.
		2	Underframes, 27'-0" long	1180 of 1924	250 0 0	Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		1	Underframe, 24'-0" long	Do.	268 0 0	Do. do.
	German	2	Underframes, 19'-6" long	1222 of 1924	117 10 0	H. J. Skelton & Co., Ltd., on behalf of Sachsische Waggonfabrik, Hamburg.
		9	Explosives Vans, 19'-6" long	Do.	167 4 0	Do. do.
		2	Bogie Rail Wagons	Do.	383 13 0	Do. do.
1925	British	1	Light Petrol Truck	1377 of 1925	215 0 0	R. C. Seal, Westminster.
		50	Cattle Wagons, B/1 type	1479 of 1925	190 18 0	Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		7	Underframes, 27'-0" long	1710 of 1925	204 0 0	Stapleford & Co., Coalville, Leicester.
		8	Underframes, 19'-6" long	Do.	198 0 0	Do. do.
		6	Bogie Underframes, 67'-0" long	Do.	719 0 0	Do. do.
		9	Bogie Underframes, 67'-0" long	Do.	703 0 0	Do. do.
					Rs. A. P.	
1921-22	Indian	450	Covered Goods Wagons, A/2 type	..	9,617 0 0	Burn & Co., Ltd., Howrah.
1925-26	Do.	75	Open Goods Wagons, C/2 type	..	3,100 0 0	Indian Standard Wagon Co., Ltd., Calcutta.

B.

Broad Gauge.

Wheels and Axles delivered from April 1922 to date.

Year.	Where purchased.	Pairs.	Description.	Contract No.	Price each pair.	Contractor.
			Wheels and axles, complete—		£ s. d.	
1922	British	200	10″ × 5″	280 of 1922	40 0 0	Charles Roberts & Co., Ltd., Wakefield.
1922	German	56	10″ × 5″	326 of 1922	37 14 0	Fried Krupp A. G., Germany.
1923		24	10″ × 5½″	710 of 1923	41 17 6	The Birmingham Railway Carriage and Wagon.
1923		448	10″ × 5½″	749 of 1923	43 2 6	The Blake Boiler Wagon and Engineering Co., Ltd., Darlington.
1923		8	10″ × 5½″	836 of 1923	42 15 0	J. Baker & Co. (Rotherham), 1920, Ltd.
1923		300	10″ × 5½″	910 of 1923	46 10 0	Do. do.
1924		48	10″ × 5½″	954 of 1924	45 10 0	Do. do
1924	British	16	10″ × 5½″	1061 of 1924	43 0 0	Do. do.
1924		2	10″ × 5½″	1114 of 1924	40 0 0	W. Beardmore & Co., Ltd., Glasgow.
1924		448	10″ × 5½″	Do.	43 0 0	Do. do.
1924		50	10″ × 5″	1165 of 1924	51 15 0	Charles Roberts & Co., Ltd., Wakefield.
1925		6	10″ × 5½″	1619 of 1925	30 15 0	John Baker & Co., Ltd., Rotherham.
1925		234	10″ × 5½″	1500 of 1925	30 15 0	Do. do.
1925		30	10″ × 5″	1642 of 1925	31 5 0	Do. do.

Note.—Weight of a pair of wheels and axles— T. C. Q.

10″ × 5½″ 1 6 2

10″ × 5″ 1 5 2

A.

METRE GAUGE.

Wagons and Underframes delivered from April 1922 to date.

Year.	Where purchased.	No.	Description.	Contract No.	Price each. £ s. d.	Contractor.
1922	Belgian	20	Bogie Underframes, 46′-0″ long	399 of 1922	350 0 0	Societe Anonyme Baum & Marpent, Belgium.
		2	Bogie Underframes, 46′-0″ long	Do.	380 0 0	Do. do.
		2	Underframes, 21′-0″ long	Do.	156 0 0	Do. do.
		1	Underframe, 19′-0″ long	Do.	150 0 0	Do. do.
1923	British	5	Oil Tank Wagon Bogie, M.B.J./1 type	711 of 1923	551 10 0	The Birmingham Railway Carriage and Wagon Co. Ltd., Birmingham.
		22	Timber Truck, 19′-0″ long	722 of 1923	123 10 0	Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		9	Underframes, 19′-0″ long	840 of 1923	169 0 0	R. Y. Pickering & Co., Ltd., Wisham.
1924	Czecho-Slovakia	4	Bogie Underframes, 46′-6″ long	957 of 1924	495 0 0	Hurst Nelson & Co., Ltd., Motherwell.
		100	Covered Goods Wagons, M.A./1 type	1014 of 1924	136 13 0	Bureau Central d'Exportation, Ringhoffer, Nesselsdorf, Standing.
		50	High sided open Goods Wagon, M.C./1 type	Do.	124 3 0	Do. do.
	British	2	Hand power Travelling Cranes, 10 tons	1051 of 1924	950 0 0	Cowans and Sheldon & Co., Ltd., Carlisle.
		1	Bogie Underframe, 38′-0″ long	1094 of 1924	595 0 0	R. Y. Pickering & Co., Ltd., Wisham.
		24	Bogie open high-sided Wagon, M.B.C./2 type	1112 of 1924	279 0 0	P. & W. MacLellan, Ltd., Glasgow.
		6	Bogie Rail Wagons, M.B.D./1 type	1113 of 1924	316 15 0	Cammell Laird & Co., Ltd., Nottingham.
		1	Hand power Travelling Crane, 10 tons	1197 of 1924	950 0 0	Cowans and Sheldon & Co., Ltd., Carlisle.
		1	Match Truck for above complete	Do.	382 0 0	Do. do.
		1	Bogie Well Wagon, 57′-0″ long	1210 of 1924	949 0 0	P. & W. MacLellan, Ltd., Glasgow.
		2	Timber Trucks, 20′-0″ long	1211 of 1924	190 0 0	Stableford & Co., Ltd., Coalville, Leicester.

Year.	Where purchased.	No.	Description.	Contract No.	Price each.	Contractor.
					£ s. d.	
1924	German	3	Bogie Underframes, 46'-6" long	1223 of 1924	232 4 0	H. J. Skelton & Co., Ltd., on behalf of Sachsische Waggonfabrik, Hamburg.
		3	Underframes, 19'-0" long	Do.	83 0 0	Do. do.
		9	Underframes, 20'-0" long M.E./1 type	Do.	75 2 0	Do. do.
		4	Bogie Underframes, 46'-6" long	Do.	226 8 0	Do. do.
	British	63	Covered Goods Wagons, M.A./1 type	1237 of 1924	143 0 0	The Metropolitan Carriage, Wagon and Finance Co., Ltd., Birmingham.
		260	Open Goods Wagons, M.C./1 type	Do.	129 17 6	Do. do.
		1	Bogie Underframe, 56'-6" long	1291 of 1924	610 0 0	Stapleford & Co., Ltd., Coalville, Leicester.
		3	Underframes, 21'-0" long	Do.	207 0 0	Do. do.
		1	Underframes, 21'-0" long	Do.	195 0 0	Do. do.
1925	Czecho-Slovakia	77	Covered Goods Wagons, M.A./1 type	1480 of 1925	138 14 6	Bureau Central d'Exportation, Ringhoffer, Nisselsdorf, Standing.
		71	Open Goods Wagons, M.C./1 type	Do.	124 14 2	Do. do.
	British	2	Hand power Travelling Cranes, 10 tons	1489 of 1925	960 0 0	Cowans and Sheldon & Co., Ltd., Carlisle.
		10	Bogie Underframes, 46'-0" long	1579 of 1925	406 0 0	Stableford & Co., Ltd., Coalville, Leicester.
		1	Underframe, 21'-0" long	Do.	194 0 0	Do. do.
	Czecho-Slovakia	12	Covered Goods Wagons, M.A./1 type	1580 of 1925	138 14 6	Ringhoffer Works, Ltd., Prague, Czecho-Slovakia.
	British	17	Underframes, 20'-0" long M.E./1 type	1583 of 1925	160 0 0	Hurst Nelson & Co., Ltd., Motherwell.
		10	Underframes, 19'-0" long	Do.	175 0 0	Do. do.
	German	15	Timber Trucks, 20'-0" long	1707 of 1925	138 0 0	Fried Krupp A. G., Germany.
					Rs. A. P.	
1923-24	Indian	164	Covered Goods Wagons, M.A./1 type	—	6,644 0 0	Jessop & Co., Calcutta.
1924	Do.	100	Covered Goods Wagons, M.A./1 type	—	4,779 0 0	

B.

METRE GAUGE.

Wheels and Axles delivered from April 1922 to date.

Year.	Where purchased.	Pairs.	Description.	Contract No.	Price each pair. £ s. d.	Contractor.
			Wheels and axles complete—			
1922	British	200	7″×4″	252 of 1922	21 15 0	W. Beardmore & Co., Ltd., Glasgow.
1922	German	110	7″×3⅝″	427 of 1922	20 0 0	Bochumer Ucrein fur Bergban, Germany.
1923		6	7″×3⅝″	507 of 1922	20 2 6	Cravens' Railway Carriage and Wagon, Ltd., Sheffield.
1923		264	7″×4″	710 of 1923	21 0 0	The Birmingham Railway Carriage and Wagon Co., Ltd.
1923		60	7″×3⅝″	769 of 1923	21 5 6	Hurst Nelson & Co., Ltd., Motherwell.
1924		18	7″×4″	837 of 1923	21 12 6	J. Baker & Co. (Rotherham), 1920, Ltd.
1924		16	7″×4″	953 of 1924	23 7 6	Do. do.
1924		20	7″×4″	1047 of 1924	23 2 6	Do. do.
1924	British	424	7″×4″	1061 of 1924	22 5 0	Do. do.
1924		50	7″×3⅝″	1165 of 1924	21 5 0	Chas. Roberts & Co., Ltd., Wakefield.
1924		470	7″×4″	1212 of 1924	21 7 6	W. Beardmore & Co., Ltd., Glasgow.
1924		52	7″×4″	Do.	20 5 0	Do. do.
1925		242	7″×4″	1408 of 1925	18 15 0	Blake Boiler Wagon Engineering Co., Ltd., Darlington.
1925		322	7″×4″	1488 of 1925	17 5 0	W. Beardmore & Co., Ltd., Glasgow.
1925		94	7″×4″	1500 of 1925	18 10 0	John Baker & Co., Ltd., Rotherham.
1925		56	7″×4″	1678 of 1925	19 10 0	W. Beardmore & Co., Ltd., Glasgow.
1925		50	7″×3⅝″	1838 of 1925	17 10 0	Hurst Nelson & Co., Ltd., Motherwell.

NOTE.—Weight of a pair of wheels and axles— T. C. Q.

7″×4″ 0 11 0

7″×3⅝″ 0 10 2

(2) *Letter from the Madras and Southern Mahratta Railway Company, Limited, dated the 18th September 1926.*

Further to my letter No. M.-730 of 28th June 1926, I have the honour to inform you that my Board desire that the further particulars contained in the undernoted documents should be communicated to the Indian Tariff Board in connection with their questionnaire regarding wagons:—

Letter No. 405, dated 13th August 1926, from the Company's Consulting Engineers in London.

Note by Madras and Southern Mahratta Railway Board on Indian Tariff Board's questionnaire queries 4 and 5 regarding wagons.

Copy of letter No. 405, dated 13th August 1926, from the Consulting Engineers, 12/14, Dartmouth Street, Westminster, S. W. 1, to the Secretary, Madras and Southern Mahratta Railway, London.

INDIAN TARIFF BOARD'S QUESTIONNAIRE.

Referring to your letter No. 361 of 29th July and in continuation of our letter of 9th August, we have now to make a few remarks on the points which could not be fully answered by your Agent.

Query 2.—Progress of Standardisation.—The standardisation of wagons and coaches is now being proceeded with and new and revised designs are being made by the Consulting Engineers in accordance with the recommendation of the Carriage and Wagon Standards Committee in India, 1925. These vehicles are called "I. R. S." pattern. The number of types will be reduced and all are designed to take a central automatic coupler. When completed, the Madras and Southern Mahratta Railway Company are prepared to order these types except for special purposes.

Queries 4 and 5.—See Madras and Southern Mahratta Railway Board's Note attached.

Query 9.—(a) The answer we conclude to this is that in accordance with instructions received by the Government through the Government Director and in order to buy to the best advantage, tenders are obtained from the widest source and continental wheels and axles of *equal quality* to British have been ordered when prices and delivery were favourable.

Query 9.—(b) Tests and inspection of continental wheels and axles.—We should like to take exception to the suggestion that continental wheels and axles are made without specification or proper inspection and we wish to place on record that there is no difference whatever in the specification and quality of the steel, the method of taking tests (the test pieces are sent over here to the National Physical Laboratory) or the workmanship, etc., and that the materials and workmanship are inspected throughout in exactly the same way as British made wheels and axles.

Query 10.—Experience of continental wheels and axles.—The Agent instances trouble with the Dortmund axles. We do not think this need be stressed. It was before the war and it is difficult to trace the actual cause of trouble. We do not place Dortmund among the best of the German makers, but we do not think that the failure of these axles (which passed every test) can be used as an argument against continental wheels and axles generally.

Query 11.—We do not at present consider basic open hearth steel suitable for the wheels and axles used on Indian railways, where the same wheels and

axles are used both for goods and coaching stock and upon which life and limb depend. This matter was carefully considered by the British Engineering Standards Association, on whose committees the best experts in the country, both on the consultant and engineering sides, are sitting. The lower grade specification, without analysis and admitting open hearth basic steel was included in the British Engineering Standards Association Specification for tyres, axles and spring steel to meet a demand by export traders for the articles for use in Contractors' locomotives and wagons, Traders' wagons and such like and was not intended for main line work such as that of Indian railways in reply to a somewhat similar question: the following technical reply was made:—

> "The Acid Open Hearth Process requires the use of selected raw materials low in phosphorus and sulphur and is therefore desirable as an additional safeguard when important parts are concerned.
>
> "Good steel can be produced by the Basic Open Hearth process from raw materials containing high percentages of phosphorus and sulphur but as the limit of the impurities in the raw materials are widened the certainty of good results in the final product is lessened and chances of error are increased.
>
> "The thermo-chemical reactions in the two processes, though somewhat similar, are not identical and affect differently the physical properties of the steel, as is shown by the varying results obtained from the physical tests upon materials made by the two processes, the chemical analyses of which nevertheless agree in their final composition."

Query 15.—Describe procedure for purchase of wagons without the intervention of the Railway Board.—The Agent has replied "through Home Board, "through Consulting Engineers who call for tenders, arrange contracts, etc." The reading of this reply may be somewhat misleading implying that the Consulting Engineers call for tenders, etc. We think a brief reply might be:—On receipt of indent from India, it is referred to the Consulting Engineers who prepare plans and specifications and recommend which reputable firms should be invited to tender for or, if tenders be called for by advertisement. In all large orders or except in special cases tenders are called for by advertisement. The tenders are received and opened by the Board and, after reference to the Consulting Engineers as to any technical points, reliability of firms, etc., the Board place the order with the lowest acceptable tenderer. After the order is placed, the work is inspected throughout and certified by the Consulting Engineers.

NOTE ON INDIAN TARIFF BOARD'S QUESTIONNAIRE.

Queries 4 and 5 regarding wagons.

Consulting Engineer's letter No. 405 of 13th August 1926.

Shortage of staff precludes this office abstracting all the details asked for in these questions. Tenders for wagons and underframes are generally called for, at Consulting Engineer's recommendation, by advertisement, sometimes by invitation but only if the number required is very small (during the last 3 or 4 years the requirements for large numbers of standard type wagons have been included in the Railway Board's call for tenders through the India Store Department). A clear 3 weeks is usually allowed before tenders are due in; when tenders are simultaneous in India and England sufficient time is added to permit India to allow firms there the same period.

Tenders are received and opened in this office under the direction of the Secretary, a note is made of all those received and they are immediately sent to the Consulting Engnieers for examination and report.

Their report always reviews the lowest tenders whether British or foreign. If they cannot recommend the lowest tender for acceptance they state the alternatives for consideration by the Board and the reason for not placing the order with the lowest tenderer usuall falls under one of the following heads:—

(1) The firm is unknown to the Consulting Engineers and they know nothing of its capabilities.

(2) The difference between the lowest foreign and the next British tender is not great enough to compensate for the additional cost of inspection, etc., delay and extra work through alterations of designs caused by difference in British and foreign sections.

(3) The delivery offered by the lowest tenderer is too long or trouble has been experienced in obtaining delivery under previous contracts.

The report of the Consulting Engineers is considered by the Chairman and Secretary whose decision is indicated thereon and it is then forwarded to the Government Director for his approval.

See also Consulting Engineer's remarks on question 15.

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9. NORTH WESTERN RAILYAY.

Letter dated the 23rd June 1926.

With reference to your letter No. 307, dated 20th May 1926, I send, herewith, 7 copies of answers to questions Nos. 1, 3 (*a*) and (*b*), 6, 7, 8 and 10 of the questionnaire regarding wagons. The remaining questions, *viz.*, Nos. 2, 3 (*c*), 4, 5, 9 and 11 to 15 will be answered by the Railway Board.

1. No metre gauge lines are under the control of this Railway. We had the following broad and narrow gauge stock on the line on 1st April 1926:—

—	Bogies.	Four-wheelers.	TOTAL.
Broad Gauge.			
Coaching	1,808	1,822	3,630
Goods	724	29,316	30,040
TOTAL .	2,532	31,138	33,670
Narrow Gauge.			
Coaching	193	101	294
Goods	457	301	758
TOTAL .	650	402	1,052

The second part of the question is not understood.

3. Our requirements during the year 1926-27 are given below:—

Item No.	Description.	Number required. Additions.	Renewals.
	Coaching Stock.		
1	Bogie steel carriages (complete rakes)	11 × 10	...
2	Bogie saloon carriage R. A.	...	2
3	Bogie tourist car	1	...
4	Bogie Compo : I and II	...	10
5	Bogie Inter Class	10	...
6	Bogie Inter and III	20	...
7	" " " "	...	15
8	Bogie Third Class	50	...
9	" " "	...	15
10	Bogie brake luggage and III	35	...
11	" " " "	...	10
12	Ordinary Prison Vans	...	5
13	Horse Boxes	...	25
14	Covered carriage trucks	...	10
15	Cold storage vans	5	...
16	Freight vans	35	...
17	Store vans	...	5
	Total in number	266	97
	Total in units	492	149
		641	
	Goods Stock.		
1	Ordinary covered goods wagons A. 1 type	923	...
2	Bogie low sided	...	25
3	Bogie high sided	20	...
4	Ordinary low sided C. 3 type	...	115
5	Oil tanks J. 1 type	10	...
6	" " (petrol)	10	...
7	Bogie rail and timber trucks B. D. 1 type	...	16
8	Water tanks six-wheeler	...	9
9	Creosote oil tanks six-wheeler	6	...
10	Travelling hand crane 25 tons	1	...
11	Crane steam portable 5 tons	1	...
	Total in number	971	165
	Total in units	997	206
		1,203	

6. Neither new wagons nor carriage underframes are built in our workshops.

7 and 8. The required information is given in the attached statement and note.

Statement showing wheels and axles purchased by the N. W. Railway from 1922-23 to 1925-26.

Description.	1923-23.					1923-24.					1924-25.					1925-26.					Weight.	Remarks.
	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.		
	General purpose.	Works.				General purpose.	Works.				General purpose.	Works.				General purpose.	Works.					
BROAD GAUGE.	Pairs.	Pairs.	£ s. d.			Pairs.	Pairs.	£ s. d.			Pairs.	Pairs.	£ s. d.			Pairs.	Pairs.	£ s. d.				
Wheels and Axles	250	...	37 10 0	Pair	British	250	60	33 1 1	Pair	Continental (Hamberg).	...	40	21 15 0 to 22 9 0	Pair	Continental (Antwerp).	200	...	21 10 0	Pair	Continental (Antwerp).	...	
9" × 4½" Journals	...	30	37 2 6	,,	Do.	250	...	40 0 0	,,	British	...	8	Not known.	...	British	...	154	21 15 0	,,	Do.	Cwts. 25 per pair (4 × 2 wheels and 1 axle).	
7'—3" Centres	...	64	37 17 6	,,	Do.	...	...	...	...	...	...	...	...	...	...	...	67	20 10 0	,,	Hamberg	...	
Do. 10" × 5" Journals	...	432	40 5 0	,,	Do.	132	...	35 14 0	Pair	Continental (Hamberg).	340	...	23 15 0	Pair	Continental (Antwerp).	120	70	21 5 0	,,	Continental (Antwerp).	26	Do.
		1,100	43 0 0	,,	Do.	...	92	33 11 0	,,	Do.	...	...	...	...	...	...	...	22 15 0	,,	Continental (Antwerp).		
7'—4" Centres	...	274	38 12 6	,,	Do.	...	16	34 16 0	,,	Do.	...	...	...	...	...	...	309	21 15 0	,,	Do.		
	...	20	41 0 0	,,	Do.	...	172	45 17 0	,,	British	...	...	...	...	...	...	80	21 12 0	,,	Do.		
Do. 10" × 5½" Journals	...	400	24 15 0	,,	Continental (Hamberg). British	...	28	44 5 0	,,	Do	...	198	22 12 0	Pair	Continental (Antwerp). British	...	120	22 5 0	,,	Hamberg		
7'—4" Centres	...	740	39 12 6	,,		...	...	...	...	...	...	150	21 15 0	,,		...	200	22 0 0	,,	British	26½	Do. *
											...	1,578	Not known.	,,		...	787	*30 15 0	,,			
																...	32	21 15 0	,,	Continental (Antwerp).	...	
																...	440	23 15 0 to 24 0 6	,,	British	...	
																	40	21 12 0 to 22 5 0	,,	Do.	...	
																	587	19 15 0	,,	Continental (Antwerp). British	...	
Wheels centre	Nos. 300	...	5 2 10	Each	British	Nos. 400	...	4 7 6	Each	Continental (Hamberg).	...	...	...	...	...	Nos. 200	2,962	Not known.	...	Continental (Antwerp).	C. qr. lbs. 4 2 14 Each wheel centre.	
3'—2" dia.	...	...	...	...	...	400	...	5 10 0	,,	British	...	...	...	...	...	...	...	3 3 0	Each	Continental (Antwerp).	...	
Axles, 9" × 4½"	100	...	10 5 9	Each	British	...	...	...	...	...	500	...	6 18 0	,,	Continental (Antwerp).	500	...	6 5 0	Each	Continental (Antwerp).	6 2 6 Each.	
7'—3" Centres	200	...	10 17 0	,,	Do.	...	...	...	...	...	...	...	...	...	...	750	...	7 6 0	,,	Do.	7 3 5 Each.	
Do. 10" × 5", 7'—4" Centres.	50	...	12 10 0	,,	Do.	...	...	...	...	...	...	...	...	...	...	50	...	8 2 6	,,	British	8 0 6 Each.	39 were purchased in India from W. Jacb & Co., Calcutta, at Rs. 197-4. F. O. R. Calcutta.
Do. 10" × 5½", do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	50	...	7 11 6	,,	Continental (Antwerp).	...	
NARROW GAUGE.																						
Wheels, chilled, cast iron, 20" dia. with axles.	...	56	9 7 6 to 9 18 5	Pair	British	...	...	...	...	...	...	...	...	...	...	...	60	7 5 0	Pair	British	6 3 3 per pair.	
																	12	7 16 3	,,	Do.	6 9 0	

* Treated by Salzberg Sorbitic process.

Statement showing wheels and axles purchased by the N. W. Railway from 1922-23 to 1925-26—contd.

Description.				1922-23.				1923-24.				1924-25.				1925-26.				Weight per wheel.	Remarks.
				Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.	Number or quantity purchased for		F. O. B. price.	Unit.	Country of origin.		
				General purpose.	Works.				General purpose.	Works.				General purpose.	Works.				General purpose.	Works.					
Wheels, Chilled, Cast iron—				Pairs.		£ s. d.			Pairs.		£ s. d.			Pairs.		£ s. d.					£ s. d.			C. qr. lbs.	
Dia.	Thread.	Rough Bore.																							
18"	4"	3"		...	...	...	...	...	50	...	2 11 0	Pair	British	...	...	...	...	...	...	...	...	...	...	1 3 3	
18"	4"	3½"		10	...	2 4 0 to 2 10 0	Pair	British	40	...	2 11 0	,,	Do.	150	...	2 3 0	Pair	British	...	...	...	...	...	...	1 2 10	
				20	...	2 9 0 to 2 15 6	,,	Do.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
18"	4"	4½"		...	...	...	...	...	50	...	2 0 6	Pair	Continental (Antwerp).	...	...	...	...	...	...	...	...	...	...	1 2 21	
18"	5"	3"		180	...	2 13 0 to 3 0 0	Pair	British	50	...	2 11 0	,,	British	...	...	...	...	...	...	...	...	...	...	1 3 24	
18"	5"	3½"		...	...	...	...	...	25	...	2 12 0	Pair	British	50	...	1 9 0	Pair	British	...	...	...	...	...	1 3 20	
18"	5"	3½"		...	...	...	...	...	...	...	...	...	...	50	...	2 9 0	...	Do.	...	...	...	...	...	1 3 20	
20"	4"	4"		...	...	...	...	...	5	...	2 19 0	Pair	British	40	...	2 10 0	Pair	British	...	...	...	...	...	1 3 20	
		3½"		40	...	2 10 6 to 3 3 8 0	Pair	British	30	...	2 9 0	,,	Continental (Antwerp).						...	...	...	...	...	2 0 4	
20"	4"	4½"		50	...	2 14 0 to 3 1 6	,,	Do.	20	...	2 19 0	,,	British	...	...	...	...	...	...	...	...	...	...	...	
									120	...	2 9 0	,,	Continental (Antwerp).	20	...	2 10 0	Pair	British	...	...	...	...	...	1 3 24	
20"	4"	3½"		30	...	2 14 0 to 3 1 6	,,	Do.	100	...	2 19 0	,,	British	...	...	...	...	...	...	...	...	...	...	1 3 22	
				20	...				...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
20"	4"	4½"		20	...	2 14 0 to 3 1 6	,,	Do.	20	...	2 19 0	Pair	British	30	...	2 10 0	Pair	British	...	...	...	...	...	1 3 24	
20"	4½"	3½"		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Pairs 250	...	2 7 0	Pair	British	1 3 20	
20"	4½"	4½"		200	...	3 17 6 to 3 8 0	Pair	British	100	...	2 16 0	Pair	Continental (Antwerp).	300	...	3 2 0	Pair	British	...	...	...	...	...	2 2 4	
									100	...	3 15 0	,,	British	...	...	...	...	...	...	...	...	...	...		
									130	...	3 7 0	,,	Do.	200	...	2 7 0	Pair	British	...	...	...	...	...	2 1 13	
21"	4"	3½"		50	...	3 2 0 to 3 10 6	,,	Do.	130	...	2 15 8	,,	Continental (Antwerp).	...	...	...	...	...	...	...	...	...	...		
									30	...	3 0 0	,,	Do.	10	...	3 3 3	Pair	British	...	...	...	...	...	2 3 3	
24"	4"	3½"		300	...	3 10 6 to 4 0 0	,,	Do.	30	...	3 11 6	,,	British	...	...	...	...	...	...	...	...	...	...		
														Nos. 100	...	4 19 6	Each	British	...	...	...	...	...	1 3 3	
Wheels, Powell-Brett 20" × 4½" × 4½".				...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		

NOTE.—As regards Freight and other charges please see the attached note.

Note on freight and other charges.

The following charges are to be added to the f.o.b. rates shown in the statement attached, to cover charges for freight, landing, etc.:—

1. Sea freight for wheels and axles	35*s.* per ton	These are the current charges and are subject to alteration according to the revision made by the India Office and I. S. D. from time to time. On supplies received from Home through the Agency of the India Office, 3 per cent. departmental charges are paid to the Director General of Stores in lieu of the charges marked (2), (3) and (4).
2. Interest	18*s.* 4*d.* per £100	
3. Insurance	4*s.* 0*d.* per £100	
4. Freight brokerage	6*d.* per ton.	
5. Wharfage charges	Rs. 2-2 per ton.	
6. Handling charges	As. 10 per ton.	
7. Customs duty	(*a*) 10 per cent. *ad valorem*.	(*a*) According to Tariff Schedule.

10. We have had experience with two classes of Continental wheels, *viz.*, steel for broad gauge stock and chilled cast iron for narrow gauge stock.

Broad gauge wheels.

Continental wheels are generally of the same quality as British wheels, except in a few instances when wheels have been received for re-turning owing to sharp flanges having developed after about 6 to 9 months' service. Such has not been the case with British wheels.

Narrow gauge wheels.

We have only received one lot of Continental chilled cast iron wheels which were manufactured by Messrs. Chilled Castings, Ltd., Belgium. Out of this consignment 127 wheels had to be replaced by the makers owing to the bore of the wheels being perforated. Defects such as this have not been noticed in British made chilled cast iron wheels.

10. SOUTH INDIAN RAILWAY.

Letter, dated 26th June 1926.

With reference to your letter No. 307 of 29th May, 1926, I give below the information asked for.

1. Total number of wagons and Coaches used by this Railway :—

	Coaches.	Wagons.
Metre Gauge	1,444	4,768
Broad Gauge	369	2,086
Main Types.	M. G.	B. G.
Coaches.		
Bogie—		
First class	18	..
Second class	17	2
Composite I & II	71	49
Third class	554	101
Brake Van and III	79	32
Postal Van and III	17	9
Goods.		
Bogie—		
Covered goods	1,395	..
High sided	204	..
Timber truck	63	12
Ballast wagons	76	..
Covered goods (4-wheeled)	..	819
Open goods	..	340
Timber trucks	..	12
Ballast wagons	..	85

2. The standardisation of types of wagons and coaches is still under revision and the number of types to be adopted will not be fixed until the revised drawings are circulated.

3. (*a*) Requirements since 1923-24 to 1925-26 is given below—

	1923-24.		1924-25		1925-26.	
	M. G.	B. G.	M. G.	B. G.	M. G.	B. G.
Bogie Parcel Vans	..	..	..	..	10	..
Twin Carriage	..	..	..	..	..	3
Bogie—						
Thirds	..	..	..	..	19	..
Composite II and Brake	..	..	..	..	2	..
Covered goods	..	..	70	..	..	..
High-sided	10	..	75	..	110	..
Timber trucks	..	12	35	..	..	..
Ballast wagons	..	..	10	..	..	..

	1923-24		1924-25		1925-26	
Bogie—*contd.*	M. G.	B. G.	M. G.	B. G.	M. G.	B. G.
Water tank	..	..	..	..	6	..
Oil tank wagons	..	..	20	..	..	..
Petrol tank wagon	4	..	..	..	..	..
Covered goods (4 wheeler)	..	50	..	50	..	30
Open goods (4 wheeler)	..	60	..	15	..	30
Ballast wagons (4 wheeler)	..	..	24	..	..	..
Brake Van (4 wheeler)	6	3	5	..	..	10

(b) Requirements in 1926-27.

	M. G.	B. G.
Bogie—		
Composite I & II	..	3
Third	..	5
Brake Van and Third	15	22
Covered goods	60	..
Water tanks	5	..
Timber trucks	10	..
Covered goods (4 wheeler)	260	70
Open goods (4 wheeler)	90	40
Ballast wagon (4 wheeler)	90	30
Brake Van (4 wheeler)	11	5

(c) Requirements for each of the 5 years subsequent to 1926-27.

	1927-28			1928-29		1929-30		1930-31		1931-32	
	M. G.	B. G.	M. G.	M. G.	B. G.	M. G.	B. G.	M. G.	B. G.	M. G.	B. G.
Bogie—											
Composite I & II	..	..	3	5	4	6	6	..	6	..	
Third	50	..	6	45	12	31	60	..	64	..	
Brake Van and Third	20	..	10	..	..	12	16	..	10	..	
Postal Van and III	..	..	..	..	7	..	5	..	5	..	
Parcel Van	..	..	..	..	5	..	..	..	..	..	
Tourist cars	..	..	..	2	..	..	..	..	..	..	
Carriage and Motor Van	..	..	..	6	..	..	..	..	..	..	
Luggage Van	..	..	..	5	..	..	..	..	..	..	
Horse Box	..	..	..	..	7	..	5	..	..	..	
Bogie—											
Covered goods	..	..	75	..	75	..	75	..	85	..	
High-sided	..	..	..	..	70	..	..	..	70	..	
Timber trucks	15	..	..	..	18	..	..	..	..	..	
Covered goods (4 wheeler)	400	50	400	158	400	143	224	50	..	31	
Open goods (4 wheeler)	196	30	60	58	115	75	..	11	..	..	
Ballast wagon (4 wheeler)	..	..	90	..	60	24	140	..	200	..	
Oil tank wagons	..	..	..	..	..	4	..	..	..	..	
Brake Van	23	..	11	9	24	9	6	..	2	..	

4. The call for tenders and their acceptance are dealt with by the Home Board and hence the information asked for is not available.

5. Please see statement 'A' attached.

6. No. We have not so far built Standard wagons or Carriage underframe in our workshops.

7. & 8. Please see statement 'B' attached.

9. (*a*) and (*b*) All our purchases are effected by the Home Board acting on the advice of the Company's Consulting Engineers, who also arrange to make necessary inspection and tests.

10. Speaking generally, we have so far not been able to see any difference in the quality of the Continental wheels as compared with British.

11. Steel made by Acid open hearth process conforming to the British Standard Specification is being specified.

12. This figure will vary according to the total requirements of the year, and if the year 1927-28 is taken into consideration the expenditure will be increased by about Rs. 2,64,000.

13. I regret I have no experience of the condition of the wagon industry in India, situated as we are far removed from the Industrial centres.

14. Such of our requirements which are to be obtained in accordance with the Indian Railway Conference Association standard is intimated to the Railway Board who include them in the annual call for tenders issued by them.

15. Indent for the required number of wagons etc., is prepared and sent to the Home Board by the Agent who transmits it to the Company's Consulting Engineers for drawing out Specifications, etc. Tenders are then invited and accepted by the Home Board according to their merits.

STATEMENT A.

Total number purchased and their English cost together with the name of the English Firm with whom the order was placed.

Description.	1922-23.			1923-24.			1924-25.			1925-26.		
	No.	F.o.b.	Name of Firm.	No.	F. o. b.	Name of Firm.	No.	F. o. b.	Name of Firm.	No.	F. o. b.	Name of Firm.
Metre Gauge.		£ s. d.			£ s. d.			£ s. d.			£ s. d.	
50 ft. Underframe with bogie, etc., complete.	13	306 4 0	Head Wrightson & Co., Ltd., Thornaby-on-Tees.	..	..	..	..	..	..	10	(a) 345 0 0	Eisenbahn Liefergermienschaft, Berlin.
Bogie steel Third, 57 ft.	..	..	..	..	..	..	..	..	..	* 18	1,688 0 0	Metropolitan Carriage Wagon and Finance Company, Birmingham.
Bogie steel Third, 60 ft.	..	..	..	..	..	..	..	..	..	1*	(a) 2,250 0 0	
Bogie steel composite, I, II and Brake, 57 ft.	..	..	..	..	..	..	..	..	..	* 2	(a) 2,409 0 0	
Bogie steel covered-Goods.	51	193 18 0	Blake Boiler wagon and Engineering Co., Darlington.	..	..	..	25	(a) 204 10 0	Eisenbahn Liefergermienschaft, Berlin.	..	..	..
	..	..	..	..	..	..	45	(a) 286 0 0	Sacheische Wagor Fabrik Werdun.	..	..	..
Bogie steel high-sided	14	198 8 0	Do. .	10	352 4 0	Leeds Forge Co., Leeds.	25	(a) 277 8 0	Do. .	110	(a) 298 10 0	Head Wrightson & Co., Ltd., Thornaby-on-Tees.
							50	224 4 0	Do. .	..	..	..
Bogie Well wagon .	1	(a) 1,257 17 0	Metropolitan Carriage Wagon and Finance Co., Birmingham	..	..	..	..	..	..	..	..	..

Bogie Steel Timber Truck.	..	..	..	..	..	..	35	(a) 230 15 6	Do.	..	..	..
Bogie steel ballast wagon.	3	192 8 0	Blake Boiler Wagon and Engineering Co., Darlington.	..	..	..	10	(a) 314 10 0	Blake Boiler wagon and Engineering Co., Darlington.	..	..	..
Bogie petrol tank wagon.	..	..	..	4	(a) 442 0 0	Rheinische Metalwaren and Maschinen Fabrik Dusseldorf.	..	..	..	..	..	..
Bogie Oil Tank wagon	..	..	..	..	..	..	20	(a) 445 0 0	Hannoversche Wagon Fabric, Hanover.	..	..	..
Bogie Water Tank .	..	..	..	..	..	..	..	..	..	* 6	(a) 522 0 0	Stable Ford and Co., Liecester.
Fenced steel high-sided (4 wheeled).	40	108 10 0	Birmingham Railway Carriage and Wagon Co., Smithwick.	..	..	..	..	..	..	..	..	..
Steel Ballast wagon (4 wheeled).	210	90 2 0	Metropolitan Carriage Wagon Finance Co., Birmingham.	..	..	..	24	128 19 6	Sachsische Wagon Fabric, Wardun.	..	..	..
Steel Brake van (4 wheeled).	7	269 10 0	Do.	6	342 4 0	Metropolitan Carriage Wagon and Finance Co., Birmingham.	5	(a) 205 10 0	Do.	..	..	..
Broad Gauge.												
Bogie Twin carriages.	..	..	..	..	..	..	..	..	..	* 3	(a) 1,567 10 0	Leeds Forge Co., Leeds.

NOTE.—The prices exclude wheels and axles.
Items marked (a) include cost of wheels and axles as separate cost is not given in the tender.
Items marked * not yet received.

STATEMENT A.—*contd.*

Total number purchased and their English cost together with the name of the English Firm with whom the order was placed—contd.

Description.	1922-23.			1923-24.			1924-25.			1925-26.		
	No.	F.o.b.	Name of Firm.	No.	F. o. b.	Name of Firm.	No.	F. o. b.	Name of Firm.	No.	F. o. b.	Name of Firm.
		£ s. d.			£ s. d.			£ s. d.			£ s. d.	
Steel covered goods (4 wheeled).	100	215 7 0	Birmingham Railway Carriage and Wagon Co., Smithwick.	50	(a) 267 14 0	Metropolitan Carriage Wagon and Finance Co., Birmingham.	50	(a) 223 0 0	Ringhoffer Neseldrof standing Czecho-Slovakia.	30	(a) 241 8 0	Metropolitan Carriage Wagon and Finance Co.
Steel open goods (4 wheeled).	..	..	..	60	(a) 268 11 0	Do.	15	(a) 212 0 0	Do.	..	2969 0 0 700 0 0 bounty paid by Government.	Indian Standard Wagon Co., Howrah.
Steel ballast wagon (4 wheeled).	60	158 5 0	Metropolitan Carriage Wagon and Finance Co., Birmingham.	..	..	..	..	..	..	..	..	..
Steel Brake van (4 wheeled).	4	374 19 0	Do.	3	503 6 0	Do.	..	..	..	* 10	(a) 430 0 0	Hurst Nelson & Co., Motherwell.
Bogie Steel Timber Truck.	..	..	..	12	366 18 0	Cravens Railway Carriage and Wagon Co., Sheffield.	..	..	..	..	..	..

NOTE.—The prices exclude wheels and axles.
Items marked (a) include cost of wheels and axles as separate cost is not given in the tender.
Items marked * not yet received.

STATEMENT A—*contd.*

Prices of the various types—Metre Gauge.

	Bogie steel covered wagon.	Bogie steel high sided.	Bogie steel Timber truck.	Bogie ballast wagon.	Bogie Petrol tank.	Bogie oil tank	Bogie water tank.	Bogie well wagon.	Fenced high sided.	Ballast wagon.	Brake van.
	£	£	£	£	£	£	£	£	£ s. d.	£	£
	(a)	(a)	(a)	(a)	(a)	(a)	(a)	(a)		(a)	(a)
F. o. b. price as per tender	232	239	176	255	382	391	462	1,134	108 10 0	102	178
Freight, Insurance, etc.	24	24	21	25	173	138	154	86	12 0 0	10	207
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs. A. P.	Rs.	Rs.
Total c. i. f. price converted @ *1s. 6d.* per rupee.	3,413	3,507	2,627	3,733	7,400	7,053	8,213	16,267	1,607 0 0	1,733	2,640
Customs duty	341	351	263	373	740	705	821	1,626	161 0 0	173	264
Landing, etc.	96	92	70	94	200	102	226	447	42 0 0	44	76
Estimated cost of erection—											
Labour	170	90	70	80	200	200	180	250	50 0 0	30	650
Stores	50	40	30	40	100	100	100	100	30 0 0	20	1,300
General charges	20	10	10	10	20	20	20	30	10 0 0	10	150
TOTAL COST	4,090	4,090	3,070	4,330	8,660	8,270	9,560	18,720	1,900 0 0	2,010	5,080

Notes (a) denotes approximate cost of wheels and axles has been deducted from the tender price.

STATEMENT A—*concld.*

Broad Gauge.

—	Steel covered goods.	Steel open goods.	Steel Ballast wagon.	Steel Brake Van.	Bogie timber truck.
	£	£	£	£	£
..	(*a*)	(*a*)		(*a*)	
F. o. b. price as per tender	195	167	158	384	367
Freight, Insurance, etc.	20	17	16	30	30
	Rs.	Rs.	Rs.	Rs.	Rs.
Total c. i. f. price converted @ 1*s.* 6*d.* per rupee	2,866	2,453	2,320	5,520	5,960
Customs duty .	286	245	232	552	596
Landing, etc.	78	72	64	148	164
Estimated cost of erection—					
Labour . . .	100	60	60	500	150
Stores	50	20	20	600	100
General charges	20	20	14	100	20
TOTAL COST .	3,400	2,870	2,710	7,420	6,990

Notes (*a*) denotes approximate cost of wheels and axles has been deducted from the tender price.

STATEMENT B.

The total quantities, weight and price of wheels and axles purchased together with price, name of firm, etc.

	1922-23.			1923-24.			1924-25.			1925-26.		
——	Quantity.	F. o. b.	Name of firm.	Quantity.	F. o. b.	Name of firm.	Quantity.	F. o. b.	Name of firm.	Quantity.	F. o. b.	Name of firm.
Metre Gauge.	Pairs.	£ *s.* *d.*		Pairs.	£ *s.* *d.*		Pairs.	£ *s.* *d.*		Pairs.	£ *s.* *d.*	
Rolled disc wheels and axles 7″ +3⅝″.	72	14 15 0	Skoda works, Pilson.	300	21 7 6	Cravens Railway Carriage Wagon Co., Sheffield.	150	11 12 8	Henschel and John Bochum.	40	(a) 15 0 0	Eisenbahn Liefergermienschaft, Berlin.
	1,086	20 14 0	Gloucester, Engineering, Co., Ltd., Glasgow.	12	22 2 6	Metropolitan Carriage Wagon and Finance Co., Birmingham.	678	(a) 13 11 8	Sacheische wagon fabrick werdun.	440	(a) 15 0 0	Head Wrightson & Co., Thornaby-on-Tees.
				40	21 10 0	Leeds Forge, Co., Leeds.	80	(a) 13 11 8	Hannoversche, Wagon fabrik, Hanover.	150	15 0 0	William Beard More & Co., Glasgow.
	6	(a) 20 14 0	Metropolitan Carriage Wagon and Finance Co., Birmingham.	16	(a) 15 0 0	Rheinische Metalwaaren and Maschinenfabrik Dusseldorf.	100	(a) 13 11 8	Eisenbahn Liefergermienschaft, Berlin.	* 24	(a) 15 0 0	Stableford & Co., Liecster.
							40	(a) 13 11 8	Blake Boiler Wagon and Engineering Co., Darlington.	* 84	(a) 15 0 0	Metropolitan Carriage Wagon and Finance Co., Birmingham.
PAIRS TO AL	1,164 Tons. 612			368 Tons. 193			1,048 Tons. 550			738 Tons. 387		

Note (*a*) denotes approximate price as separate price is not given in the tender.
A sum of £1-5-0 and £2 may be taken as the approximate charges for freight, etc., for a pair of M. G. & B. G., wheels and axles respectively.
* Not yet received.

STATEMENT B.

The total quantities, weight and price of wheels and axles purchased together with price, name of firm, etc.

	1922-23.			1923-24.			1924-25.			1925-26.		
——	Quantity.	F. o. b.	Name of firm.	Quantity.	F. o. b.	Name of firm.	Quantity.	F. o. b.	Name of firm.	Quantity.	F. o. b.	Name of firm.
	Pairs.	£ s. d.		Pairs.	£ s. d.		Pairs.	£ s. d.		Pairs.	£ s. d.	
Broad Gauge.												
Rolled disc wheels and axles 10″ × 5″.	200	34 12 7	Bochumer Verein Steel Works, Germany.	220	(a) 39 12 6	Metropolitan Carriage Wagon and Finance Co., Birmingham.	130	(a) 23 5 0	Ringhaffer Nesseld of Standing Czecho-Slovakia.	60	(a) 23 5 0	Metropolitan Carriage Wagon and Finance Co., Birmingham.
										* 20	(a) 23 5 0	Hurst Nelson & Co., Motherwell.
	128	38 18 0	Gloucester Engineering Co., Ltd., Glasgow.	48	39 12 6	Cravens Railway Carriage and Wagon Co., Ltd., Sheffield.	..	..	..	60	..	Supplied by the E. B. Railway.
				6	43 12 6	Metropolitan Carriage Wagon and Finance Co., Birmingham.	..	..	..	(9″ × 4½″) * 18	(a) 23 5 0	Leeds Forge Co., Leeds.
PAIRS TOTAL .	328			274			130			158		
	Tons. 443			Tons. 370			Tons. 176			Tons. 212		

NOTE—(a) denotes approximate price as separate price is not given in the tender.
▲ sum of £1-5-0 and £2 may be taken as the approximate charges for freight, etc., for a pair of M. G. & B. G. wheels and axles respectively.
*Not yet received.

XXIII.—Questionnaire issued by the Tariff Board to the Railway Board and Railways.

Locomotives.

1. What is the total number of locomotives used by your railway on the broad and metre gauges respectively? What are the main types of these and how many locomotives are there of each type?

2. Please state the present position in regard to the standardisation of types of locomotives and whether your Company contemplates a reduction in the number of types.

3. Please state—

(*a*) your requirements since 1923-24 of each type of locomotive,

(*b*) your requirements in 1926-27, and

(*c*) your average requirements for each of the five years subsequent to 1926-27 in so far as it may now be possible to estimate them.

4. Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of locomotive:—

(1) Date on which the tenders were opened.

(2) Type of locomotive for which tenders were sent in and whether broad gauge or metre gauge.

(3) Number of units of each class stated in the call for tenders.

(4) The tenders received.

(5) The price at which and other conditions subject to which the order was placed and the name of the firm to which it was given.

(6) The number of units for which the order was actually placed.

N.B.—If the locomotives are not received complete and ready to run, please state exactly what additions have to be made to the price quoted in the tenders in order to arrive at the price of the complete locomotive.

5. With reference to clause (5) of question 4, please give the particulars of the prices quoted in the tenders in the following form:—

(*a*) Price f.o.b. port (in sterling).

(*b*) Frieight, insurance and freight brokerage (in sterling).

(*c*) Total c.i.f. price (in rupees).

(*d*) Rate of exchange taken for conversion purposes.

(*e*) Customs duty (in rupees).

(*f*) Landing, wharfage and port charges (in rupees).

(*g*) Estimated cost of erection (in rupees) in the following form:—

1. Labour, etc.
2. Stores.
3. Supervision, overhead charges, etc.

(*h*) Total cost (in rupees).

6. Do you build locomotives in your own workshops? If so, please give the cost of a typical unit of each under the following headings:—

1. WORKS COSTS.

Type and description of locomotive.

	Weight.	Rate.	Value.
1. Materials, *e.g.*—			
Steel, Indian			
Steel, Imported British			
Steel, Imported Continental			
Castings, Indian			
Castings, Imported British			
Castings, Imported Continental			
Fittings			
Other materials			
Stores, etc.			
2. Cost above materials—			
Power			
Fuel			
Labour			
Repairs			
General works supervision			
Nett cost per unit of output			
Total number of units of each type turned out in the year			

7. Please state to what extent your requirements as to locomotive are obtained through the Railway Board.

8. Please describe briefly the procedure followed in the purchase of locomotives when it is effected without the intervention of the Railway Board.

9. The Peninsular Locomotive Company have stated that the requirements of the Government Railways for spare parts for locomotives would keep several factories of the size of the Peninsular Locomotive Company's works in full employment. The Tariff Board would be glad to know—

(1) if your railway consider this statement correct;

(2) the policy of your railway with regard to the manufacture of spare parts for locomotives;

(3) to what extent your railway is prepared to place orders for these spare parts with outside firms provided the firms could efficiently manufacture them.

XXIV.—Replies to questionnaire regarding Locomotives.

1. ASSAM BENGAL RAILWAY COMPANY, LIMITED.

Letter, dated the 16th July 1926.

With reference to your letter No. 334, dated the 4th June 1926, I have the honour to forward herewith a statement containing the replies to the questionnaire on the subject of locomotives.

ASSAM-BENGAL RAILWAY COMPANY, LIMITED.

" (Incorporated in Great Britain.)

METRE GAUGE.

Answers to questionnaire by Tariff Board regarding Locomotives.

1. The total number of locomotives on this line on 30th June 1926 167

The following are the main types:—

F	$\frac{0\times6\times0}{14\times42\frac{1}{2}\times140}$	40
H	$\frac{4\times6\times0}{15\times48\times160}$	37
H	$\frac{4\times6\times0}{16\times48\times160}$	25
K	$\frac{4\times8\times0}{16\times43\times160}$	16
K	$\frac{4\times8\times0}{17\times43\times160}$	4
M	$\frac{4\times6\times0}{15\times57\times160}$	5
M	$\frac{4\times6\times0}{16\times57\times160}$	6
M	$\frac{4\times6\times0}{16\frac{1}{2}\times57\times160}$	10
C	$\frac{2\times6\times2T}{15\times43\times160}$	8

2. An indent has been sent Home for 10 standard Locomotive Committee's 2-8-2 type "Mikado" engines with 9¼ ton able load to be supplied during the current financial year. Provision has also been made for 10 more engines in 1927-28 of which 5 will be "Mikado" types and as for the remaining five it is proposed to have "Garrett" type for our Hill Section, though this is not yet settled.

3. (*a*) No locomotives were obtained from 1923-24 to 1925-26.

(*b*) Ten 2-8-2 (Mikado).

(*c*)

1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
10	5	5	5	5.

4 and 5. I am unable to answer these questions.

6. No.

7. No locomotives have been obtained through the Railway Board.

8. All purchases of locomotives are made by the Home Board through our Consulting Engineers at Home Messrs. Rendal Palmer and Tritton.

9. (1) I have no information regarding this.

(2) and (3) I prefer to make steam and special fittings myself, but am prepared to purchase all other duplicates requiring renewal in the open market provided the quality of metal and workmanship is satisfactory and the price not more than it costs me to make similar items.

2. BENGAL NAGPUR RAILWAY COMPANY, LIMITED.

(1) *Letter, dated the 9th July 1926.*

With reference to your letter No. 334, dated the 4th June 1926, I beg to send herewith 6 copies of my replies to Tariff Board questionnaire regarding locomotives.

Questionnaire regarding Locomotives.

Question No. 1.—

Broad Gauge 5'-6"	684
Narrow Gauge 2'-6"	133

Main Types—

	Rs.	A.	P.		
G-38 . . .	4	6	0	Saturated Passenger .	38
H-57 . . .	2	8	0	Saturated Goods . .	117
H. M-60 . . .	2	8	0	Superheated Goods .	277
H. S-174 . . .	4	6	0	Superheated Passenger .	45
G. S-30 . . .					
H. S. M-78 . . .					
K-15 . . .					
H. X-25 . . .					

Question No. 2.—It is proposed to adopt the standards laid down by the Indian Loco. Standards Committee as far as they are suitable for our existing Locomotives.

This Railway proposes to reduce the number of types of locomotives.

Question No. 3.—

(*a*)

1923-24	1924-25.	1925-26.
30 H. S.	47 H. S. M.	5 G.S.
	2 Garratt.	31 H. S. M.

(*b*) *Nil.*

(*c*)

1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
Nil.	*Nil.*	2 G. S.	2 G. S.	2. G. S.
		6 H. S.	8 H. S.	11 H. S.
		8 L. M.	8 L. M.	8 L. M.

Question No. 4 (1).—(4) I am not in a position to reply as the purchases are made by my Board of Directors in London.

Question 4 (5) and (6).—Please see statement attached.

Question No. 5.—See answer to 4 (1) to (4).

Question No. 6.—No.

Question No. 7.—None.

Question No. 8.—See answer to 4 (1) to (4).

Question No. 9.—The answer to this question will follow.

Statement.

No. and particulars.	C. I. F. price each.	Additional charges to complete erection.	Name of Contractors.
	1922-23.		
	Nil.		
	1923-24.		
	£1=Rs. 15.		
20 H. S. Class . . .	Rs. 81,780	Rs. 1,205	Vulcan Foundry Ld.
19 H. S. Class . . .	„ 80,175	„ 1,205	R. Stephenson & Co., Ld.
	1924-25.		
	£1=Rs. 13-0-0.		
16 H. S. M. Class (erected) .	Rs. 91,680	Rs. 4,961	Sir W. G. Armstrong and Whitworth & Co., Ld.
31 H. S. M. Class . . .	„ 89,483	„ 4,709	
2 Garratt Locos. . . .	„ 2,06,973	„ 6,908	Beyer Peacock & Co., Ld.
	1925-26.		
	£1=Rs. 13-0-0.		
21 H. S. M. Class (erected) .	Rs. 89,557	Rs. 4,961	Sir W. G. Armstrong and Whitworth & Co., Ld.
10 H. S. M. Class . . .	„ 87,568	„ 4,709	
5 G. S. Class . . .	„ 90,363	„ 6,131	Vulcan Foundry Ld.

(2) *Letter from the Bengal Nagpur Railway Company, Limited, dated the 22nd July 1926.*

With my letter No. 14038, dated 9th July 1926, I sent the replies of the Railway to the questionnaire regarding locomotives. The answer to question 9 was omitted and I stated that it would follow.

2. Considerable difficulty has been found in framing an answer to this question. My general answer to the 3 sub-questions is that our Loco. Workshops are designed and equipped to produce all our normal requirements of a large proportion of loco. spare parts. It is naturally not our policy to throw that equipment out of use, our policy is to manufacture for ourselves up to a feasible point. In this class we should not place outside orders unless we had a rush of work with which we could not cope.

3. Broadly speaking the balance of spares are of a class which are not manufactured in India and which we therefore import utilising the existing machinery for inspection, etc., afforded by our Consulting Engineers. If spares of this class were to come to be made in India we could only purchase satisfactorily here by creating facilities for inspection, etc., corresponding with our existing facilities in Great Britain.

4. This is only a brief summarised reply. To supplement it I enclose a copy of a letter No. 2296, dated 14th July 1926, from the Chief Mechanical Engineer, Bengal Nagpur Railway to myself.

Enclosure.

Copy of letter No. C. M. E. 2780/9/2296, dated the 14th July 1926, from the Chief Mechanical Engineer, Bengal Nagpur Railway, Khargpur, to the Agent, Bengal Nagpur Railway, Calcutta.

Your No. 14064, dated 10th July 1926, Tariff Board.

Further to my No. P. A. (T.) 2780/9/2143, dated 3rd July 1926.

9. (1) I am not quite sure what is understood by the word "requirements." It may mean the total of all workshop manufactures *plus* what is manufactured locally by outside firms in times of pressure *plus* what is ordered on Home Indent but could be made in India if necessary. It may also be taken to apply to parts which pressure of work renders it impossible for the Company's workshops to produce at the moment *plus* what might be manufactured in India instead of being obtained on Home Indent. In the former case, the requirements for spare parts would justify the existence of perhaps two outside factories but in the latter case it is probable that one properly laid out and well equipped factory would suffice. It may be pointed out that many articles which are from time to time manufactured by outside firms are not articles absolutely special to the locomotive.

(2) The following spares are ordered on Home Indent:—

(*a*) Boilers.

(*b*) Wheels and Axles.

(*c*) Tube plates.

The following spares are purchased locally:—

(*a*) Nuts and Bolts.

(*b*) Rivets.

(*c*) Pins.

(*d*) Washers.

(*e*) Other items such as Brake Pull Rod ends, Spring Hangers, Cotters, etc.

Items such as these latter are more or less common to all mechanical engineering products and not special for locomotive use. The remaining items which are usually manufactured is our shops are duplicate parts of locomotives to suit our own particular types and for no other purposes.

It may be that a firm like the Peninsular Locomotive Company would undertake the manufacture of these duplicate parts if our requirements were quite beyond capacity of our present shops and probably the same reasons would apply to all Government Railways. In other words, with the general expansion of Railways, the expansion of a firm like the Peninsular Locomotive Company would increase and would save the expansion of the workshops of individual Railway Companies.

The cost of manufacture would now come under consideration. It might be that the expansion of a Railway Workshops or the provision of a District shop to suit local needs would enable a Railway to manufacture at a lower cost than a private firm and as the private firm has no competition, it would attempt to make its own prices. Then the argument would be that unless the private firm decreases prices to an extent indicated by various Railways, it would be more profitable for a Railway to make its own arrangements for manufacturing articles than to enter into negotiation with the private firm.

The policy of this Railway is to manufacture all possible spare parts as we can fix our own costs. Here again we have to distinguish between the ordinary commercial articles in general use and loco. duplicates proper. Some of the articles as detailed above have to be obtained on Home Indents as there is no plant in India capable of producing them. This refers in the main to wheels and axles and boiler plates. Others detailed in the second list given above being ordinary commercial articles are turned out by specialised firms in such quantities as to make it cheaper to purchase them in the open market. Such items are usually bolts and nuts and taper pins and articles of a similar nature. I do not think that the Peninsular Locomotive Company would attempt to manufacture these but what we are really concerned with is in the manufacture of duplicate parts to suit our own locomotives. Many of these parts require steel of particular specifications and the accuracy of the workmanship must be guaranteed.

3. We would be prepared to place orders for loco. duplicates proper with outside firms provided that the materials and accuracy of the work and the cost of it meet our requirements but at present, we are more or less able to produce all those, with, perhaps, a very few exceptions in rush times, and the present indications of placing outside orders for such parts are not great.

In cases where duplicate parts are ordered on Home Indents such orders are placed through our Consulting Engineers who provide the staff for inspection not only during the process of manufacture but when the raw material comes to hand and thus the accuracy of the work and the suitability of the material is assured. If this work was done in India it would be necessary for us to have our own fully qualified inspection staff and to get proper men who have had a high degree of technical training. It is of course probable that in such a case there would be one inspection staff common to Government owned Railways so that a special staff for Bengal Nagpur Railway purposes would not be necessary. In fact as previously mentioned; the whole question depends on the surplus requirements, combined with cost.

3. BOMBAY, BARODA AND CENTRAL INDIA RAILWAY COMPANY.

(1) Letter, dated the 9th July 1926.

With reference to your letter No. 334, dated 4th June 1926, I beg to enclose a copy (with six spare copies) of the replies to the questionnaire regarding locomotives.

Replies to questions regarding locomotives.

	Metre Gauge.	Broad Gauge.
1. The total number of locomotives used 513.		See Statement No. I attached.
The main types are:—		
4-6-4 . . 20		
4-4-4 . . 24		
0-6-0 . . 178		
4-6-0 . . 121	(Passenger and Goods type.)	
4-4-0 . . 148		
TOTAL . 491		
2. It is proposed to gradually eliminate the 0-6-0 type and some of the 4-4-0 type. The 4-6-4 and 4-4-4 are tank engines and are used for shunting and small branch line work. Two of each Y C and Y D class engines are on order from Home and may be added to the engines shown under (1).		2. In view of the fact that the life of a locomotive is about 30 years it is not likely that the number of types is likely to be reduced.
3. (*a*) 15 G-2 class engines, 4-6-0 type, were built in the Ajmer Central Shops in 1923-24, 15 of the same type in 1924-25 and 15 in 1925-26. (*b*) 15 G-2 class engines are under construction at Ajmer for 1926-27 and 4 locomotive Standard Committee's engines have been ordered from Home. (*c*) We propose building 25 engines each year subsequent to 1926-27, 25 D-2 class engines, 4-6-4 type, are to be built in 1927-28. We are replacing old and lighter engines with those of modern type and as far as possible our building programme runs in line with that of our road renewals.		3. See Statement No. II attached.
4. No locomotives have been purchased since 1922-23.		4. Tenders are invited by the Company's Home Board in London.
5. Does not concern this system as Metre Gauge locomotives are constructed from raw materials in the Company's Workshops at Ajmer.		5. See Statement III attached.
6. Yes, see answers to question 3.		6. On the Broad Gauge locomotives are not built in our workshops.

Metre Gauge. Broad Gauge.

1. *Works Costs.*

Type and description of locomotives 1 G-2 class, 4-6-0 type, superheated goods engine. Tractive effort 16,970 lbs.

	Weight.	Rate.	Value.
			Rs.
Materials, *e.g.*—			
Steel, Indian	...	..	...
Steel, Imported British / Steel, Imported Continental.	...	...	13,359
Castings, Indian	...	...	1,782
Castings, Imported British. / Castings, Imported Continental.	...	...	2,295
Fittings	...	...	4,399
Other materials	...	...	9,277
Stores, etc.	...	...	2,888

2. *Cost of above materials.*

General charges including Power, Fuel, Repairs.	...	...	6,000
Labour	...	...	12,000
General Works supervision.	...	...	2,000
Net cost per unit of output.	...	...	54,000

Total number of units of each type turned out in the year, 15.

7. No locomotives have so far been obtained through the Railway Board except six 4-6-2 and two 4-6-0 which were commandeered during the war, of the latter two have recently been sold to the Bikaner State Railway.

7. It is probable that most of requirements for locomotives will be obtained through Railway Board.

8. Does not concern the Metre Gauge System.

8. We indent on our Home Board English Indent. Tenders, Specifications, etc., are made out by our Consulting Engineers, and the tenders accepted by the Board.

9. (1) The information at our disposal is inadequate to give a reply to this.
(2) and (3) We have ample plant and facilities to efficiently manufacture all we need for our requirements.

9. Reference is invited to the report of the Committee on State Railway Workshops, which deals with this question and agrees the practice obtaining on this railway.

Enclosure No. 1.

STATEMENT No. I.

Question 1.—The total number of locomotives on list on 1st April 1926 was 434 *plus* 13 (duplicate)=447.

The types are:—

	Type.	No.	
A. 2-6-4	Tank	16	
C. 0-6-0	...	20	
D. 4-4-0	...	20	
DI. 4-4-0	...	24	
D2. 0-6-0	...	28	
D3. 0-6-2	Tank	37	
E. 0-8-0	„	3	
F. 0-6-0	...	56	
G. 2-8-0	...	75	
H. 4-6-0	...	89	
J. 0-6-0	...	32	
L. & L2. 0-6-0	...	31	Includes 11 duplicates.
M. 2-8-2	...	2	
P. 4-6-2	...	2	
T. 0-6-2	Tank	10	
Y. 4-4-0	...	2	These are duplicates.
		447	

Enclosure No. 2.

STATEMENT No. II.

Question No. 3—

(*a*) Requirement of locomotives since 1923-24 to 1925-26:—

Class.	1923-24.	1924-25.	1925-26.	Total.
G. Class engines	10	...	..	10

(*b*) Requirements in 1926-27—"*Nil.*"

(*c*) Requirements for 1927-28 to 1931-32:—

1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	Total.
...		12	12	12	36

STATEMENT No. III.

Statement of purchases of Locomotives since 1922-23 by the Home Board.

	Freight Insurance, Freight brokerage. (Sterling.)	Total C.I.F. price. (Rupees.)	Rate of exchange taken for conversion purposes.		Custom's duty.	Wharfage & loading charges, etc.	Cost of erection.			
			Varying from.	Varying to.			Labour.	Stores.	Supervision.	T
	£ s. d.	Rs. A.	s. d.	s. d.	Rs. A.	Rs. A.	Rs.	Rs.	Rs.	
)	14,782 11 11	36,30,001 15	1 $3\frac{6}{32}$	1 $3\frac{13}{16}$	3,64,787 7	25,262 6	33,280	20,080	3,740	5
)	7,572 1 5	12,13,558 9	1 $4\frac{1}{8}$	...	30,829 3	18,257 11	33,130	12,000	3,136	4
3	1,459 12 8	2,35,192 14	1 $4\frac{32}{33}$	...	6,031 12	4,404 5	...	...	...	
4	1,438 0 11	2,39,312 13	1 $4\frac{3}{4}$	..	6,031 10	4,686 6	...		...	
5	12,266 7 5	12,42,812 2	1 $4\frac{32}{33}$	1 $5\frac{3}{16}$	31,520 6	30,599 13	24,960	15,060	2,805	4
)	5,267 14 6	7,71,599 14	1 $5\frac{1}{16}$	1 $5\frac{3}{16}$	19,836 12	15,175 15	19,970	13,850	2,370	3
)	8,234 5 8	8,39,608 9	1 $4\frac{32}{33}$	...	21,532 15	20,327 8	16,640	10,040	1,870	2

(2) *Letter from the Bombay, Baroda and Central India Railway Company, dated the 21st July 1926.*

With reference to the replies to the questionnaire sent to the Tariff Board, *vide* my letter of the 9th July 1926, I would draw your attention to the fact that customs duty charges shewn in each of the statements accompanying my above letters, though paid by the Railway Company during the years 1921-22, 1922-23 and 1923-24, were refunded to this Railway subsequently at the time when it was decided that stores imported by the Railway Company were to be considered as stores belonging to the Government and as such not liable to customs duty.

As the amounts of duty refunded have not been posted in our Audit books, I have left the customs charges as originally paid by this Railway in the statements referred to above.

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4. BENGAL AND NORTH-WESTERN RAILWAY COMPANY, LIMITED.

Letter, dated the 17th July 1926.

With reference to your letter No. 334, dated 4th June 1926, I beg to enclose herewith 7 copies of sets of questions with replies concerning locomotives.

Fuller replies could have been given had time allowed us to refer many of the questions to our Consulting Engineers in London Messrs. Rendel Palmer and Tritton.

Replies to questionnaire.

1. Total No. of locomotives 353 (this includes 23 engines borne on the replaced list). Main types of the above and the total No. of each type are as under:—

123 " F " class.

106 B. E. S. A. type.

124 other classes.

2. We are gradually standardizing the engines and some of the old ones have already been replaced by standard superheater engines. The No. of types has therefore been reduced. No further reduction in types will be made at present.

3. (*a*) Four superheater passenger engines were received under indent No. 1 of 1923-24 to replace old D and E class engines.

(*b*) Two standard Locomotive Pacific type superheater engines to replace two F class engines.

Four tank shunting engines to replace 4 old " C " class engines.

(*c*)

1927-28.	1928-29.	
6	4	Type of engines Standard Loco. Pacific type superheater.
1929-30.	1930-31.	
2	2	

4. 2 standard passenger superheaters—*Vide* Indent No. 9 of 1922-23.

4 standard passenger superheaters—*Vide* Indent No. 1 of 1923-24.

(1)
to
(2)

Information not available in this office.

(3)
to
(6)

Information not available in this office.

N.B.—Locomotives are received complete but they are erected here at cost of about Rs. 1,350 excluding freight, etc.

5. A statement giving all the information available in this office is attached.

6. Locomotives complete are received from England and erected in the Workshops here. For cost of erection see statement attached to paragraph 5 above.

7. Only two locomotives Pacific type superheater have been ordered.

8. Indents and estimates are submitted to Home Board for sanction. Purchases arranged through our Consulting Engineers Messrs. Rendel Palmer and Tritton, England.

10. (1) Size of Peninsular Locomotive works not known.

(2) We manufacture our spare parts.

(3) We have sufficient to manufacture spare parts.

Locomotives (Enclosure to question No. 5.)

Indent No. and year.	1922-23.					1923-24.				
	English cost including freight, etc.	Labour.	Stores.	General charges.	Total per Locomotive.	English cost including freight, etc.	Labour.	Stores.	General charges.	Total per loco.
9 of 1922-23 (2) . .	65,817	956	314	76	67,163	...	...	...	..	...
1 of 1923-24 (4) . .	...	...	...	...	...	65,318	875	421	74	66,688

5. BURMA RAILWAYS COMPANY, LIMITED.

Letter, dated the 12th July 1926.

I forward my replies (so far as I am able to furnish them) to the following questionnaires:—

(*e*) Locomotives (received with your letter 334, dated the 4th June 1926).

2. Where views are expressed they are not necessarily those of my Home Board.

3. A copy goes to the Railway Board.

Replies to Tariff Board's letter No. 334, dated the 4th June 1926.

1. This is a metre gauge railway.

The total number of locomotives on the railway is 383.

The types are:—

B. R.

A Class	4-6-4 suburban tanks	14
B	2-8-0÷0-8-2 Garret	1
C	4-4-0 Suburban tanks	8
F	0-6-0 tender engine I. S. R. F class	133
G	2-6-0 tender engine I. S. R. F class	17
H	0-6-0+0-6-0 Fairlies	7
J	4-6-0 B. E. S. A. Passenger	46
K	4-6-0 B. E. S. A. mixed	96
L	0-4-0 tanks motor coach	4
M	2-6-2 Shunting tanks	35
N	0-6-0+0-6-0 Mallets	22
		383

2. The types G and H above are being scrapped and replaced.

Two new types will shortly be added.

Garret like B but compounded.

Goods engine 2-8-2 Y. D. type got out by the Loco. Standards Committee, 1924.

3. (*a*) Since 1923-24 the new engines put on the line are:—

5	N Class
1	B ,,
5	J ,,
14	K ,,
3	A ,,
5	M ,,

(*b*) 7 Y. D. Goods engines.

1 Garret B. Class.

(c) 1927-28 . 7 Y. D. additional 4 M and 3 B replacements.
1928-29 . 7 Y. D. additional 3 B and 4 Y. D. replacements.
1929-30 . 7 Y. D. additional 4 Y. D. replacements.
1930-31 . 7 Y. D. additional 5 Y. D. replacements.
1931-32 . 7 Y. D. additional

4 and 5. Information not available.

6. Locomotives are not built in our workshops.

7. The Railway Board were to have arranged for the 7 new standard Y. D. engines in 1926-27 programme but months later we were asked to send an indent through our Home Board.

8. From Burma an indent is sent to London and our Home Board does the rest.

9. (1) Have no information.

(2) We make our own with few exceptions.

(3) Would be glad to place orders if it were economically sound but it is better to keep workshops which can continue to meet our own demands for spares.

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6. EASTERN BENGAL RAILWAY.

Letter, dated the 30th June 1926.

With reference to your letter No. 334, dated 4th June 1926, I enclose herewith a statement containing the information required by the Tariff Board on the abovementioned subject.

1. Total Nos. of locomotives in use on this Railway on 31st May 1926.

Broad Gauge.	Metre Gauge.
325	235

(Including Replaced Stock—6 Broad Gauge and 13 Metre Gauge).

The following is a list of the main types with numbers of each:—

Broad Gauge.			Metre Gauge.		
B.E.S.A.	4-4-2	7	B.E.S.A.	4-6-0 (Pass:)	58
,,	4-6-0	26		4-6-0 (Mixed)	105
,,	4-4-0	9		2-6-2 Tank	4
,,	0-6-0	115		4-8-0	5
,,	2-6-4	45			172
,,	2-6-2	5			
		207			

2. Railway Board will reply to this question.

3. (a) Locomotive Stock provided for in the Programme for—

Broad Gauge.

1923-24.

Additions and Betterments . . . . . *Nil.*

1924-25.

Additions . . . . . *Nil.*

Betterments—2-6-4 Type (Suburban) 6
0-6-0 ,, (Goods) . . . . . 4 } 10

1925-26

Additions—4-6-0 Type (Passenger)	7	46
Betterments—4-6-0 Type (Passenger)	18	
0-6-0 Type (Goods)	16	
2-6-4 Type (Suburban)	5	

Metre Gauge.

1923-24.

Nil.

Additions and Betterments . . . . . 1924-25.

Nil.

1925-26.

Nil.

3 (*b*).

Broad Gauge.

1926-27.

Additions—Supersentinal Engine	1	13
Betterments—4-6-2 Type (Passenger)	5	
2-6-4 ,, (Suburban)	5	
2-8-2 ,, (Goods)	2	

Metre Gauge.

1926-27.

Additions—4-6-2 Type	2
Supersentinal engine	1
Betterments	*Nil.*

3 (*c*) 4, 5, 7, 8 and 9. Railway Board will reply to these questions, *vide* their letter No. 214-S.-1, dated 16th June 1926.

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7. EAST INDIAN RAILWAY.

Letter, dated 2nd August 1926.

With reference to your letter No. 334, dated 4th June 1926, I beg to attach herewith answers to the set of questions concerning locomotives.

2. From the enclosed copy of the Railway Board's letter No. 214-S.-1, dated 16th June 1926, it will be seen that reply to questions 2, 3 (*c*), 4, 5, 6, 7, 8 and 9 will be furnished by them but in accordance with the request made in the accompanying copy of the Board's telegram No. 214-S.-1, dated 24th June 1926, questions 4 and 5 for period prior to being taken over by the State are answered by me.

3 (*a*) and (*b*) Please see Statement " B " attached herewith.

Answers to questionnaire regarding Locomotives.

1. Total number of locomotives 1,694 (E. I. R. 1,339 and O. and R. 355) on the Broad Gauge. No Metre Gauge locomotives on the Railway. Regarding types and number of each type of locomotives—Please see Statement "A" attached.

2. Will be answered by the Railway Board.

3. (*a*) and (*b*) Please see Statement " B " attached.

(*c*) Will be answered by the Railway Board.

4. This information is not available in this office as the tenders for locomotives prior to being taken over by the State were dealt with by the then Board of Directors of the E. I. Railway Company.

5. For particulars under questions 5 (*a*) to (*h*) please see Statement " C " attached (5 sheets).

6 to 9. Will be answered by the Railway Board.

STATEMENT " A ".

Engine Stock on 31st March 1926.

E. I. R. Section.			Remarks.	O. & R. Section.			Remarks.
Class.	Type.	Total No.		Class.	Type.	Total No.	
A	4-4-0	78		AO	4-4-0	14	
C	0-6-0	54		B2	0-6-0	13	
CC	0-6-0	2	From O. & R.	B3	0-6-0	6	
CA	0-6-0	378		OC	0-6-0	5	
SG	0-6-0	63		SG	0-6-0	42	
SGc	0-6-0	2		SGc	0-6-0	24	
SGS	0-6-0	42		SGS	0-6-0	69	
P	4-6-0	78		P	4-6-0	26	
Pc	4-6-0	1		HP	4-6-0	55	
HPS	4-6-0	40		HPc	4-6-0	2	
PS	4-6-2	2		GO	2-4-0	12	
AP	4-4-2	46		HG	2-8-0	30	
G	2-8-0	100		HT	2-8-2	4	
HG	2-8-0	23		DT	0-6-2	18	From E. I. R.
HGS	2-8-0	111		DT2	0-6-2	17	
D	0-6-0	2		J	4-4-2	6	
D	0-4-2	1		H	2-6-0	12	
BT	2-6-4	15					
BTc	2-6-4	1					
HT	2-8-2	32	2 From O. & R.				
CT	0-6-4	125					
CTM	0-6-4	40					
DT	0-6-2	32					
ST	0-6-0	8					
GT	0-8-0	24					
CBT	0-8-0	26					
H	2-6-0	4	From O. & R.				
		1,339				355	

STATEMENT " B ".

Statement showing the requirements of Locomotives during 1923-24 to 1925-26.

Description.	A						B	
	1923-24.		1924-25.		1925-26.		1926-27.	
	Addition.	Replacement.	Addition.	Replacement.	Addition.	Replacement.	Addition.	Replacement.
2-8-0 type HGS, class Engines and Tenders.	25	...	...	...	...	...	...	...
0-6-0 type SGS. class Engines and Tenders.	10	22	...	...	...	...	...	...
2-8-2 type HT- class tank Engines	2	28	...	...	...	...	...	...
4-6-0, type PS. class Engines and Tenders.	...	2	...	...	...	...	...	...
4-6-0 type HPS. class Engines and Tenders.	...	...	...	40	...	...	...	...
4-6-2, type "XA" class Engines and Tenders (Branch).	...	...	..	...	...	...	...	...
4-6-2 type "XB" class Engines and Tenders (Light).	...	...	...	...	..	...	2	12
4-6-2 type "XC" class Engines and Tenders (Heavy).	...	...	...	...	...	...	...	...
2-8-2 type "XD" class Engines and Tenders (Light).	...	...	...	...	..	...	2	...
2-8-2 type "XE" class Engines and Tenders Heavy).	...	...	...	...	...	...	2	10
0-6-0 type "ST" class tank Engines	...	...	...	...	...	...	...	...
2-8-0 type "HG" class Engines and Tenders.	...	...	...	...	39	39	...	...
	37	52	...	40	41	39	6	22

STATEMENT " C ".

2-8-0 Type Goods Engine and Tender.

(*a*) Price f.o.b.	£5,762-10-0.
(*b*) Freight, insurance and inspection	£721-3-11.
(*c*) Total c.i.f. price	Rs. 77,804-5-10.
(*d*) Rate of exchange	1*s*. 8*d*.
(*e*) Custom's duty	Rs. 2,431-6-0.
(*f*) Landing and Port charges	Rs. 306-1-2.
(*g*) 1. Labour, etc.	Rs. 924-0-0.
2. Stores	Rs. 462-0-0.
3. Supervision, overhead charges, etc.	*Nil*.
(*h*) Total cost (in rupees)	Rs. 81,927-13-0.

2-8-2 Type Tank Enigne.

(*a*) Price f.o.b.	£4,405-12-0.
(*b*) Freight, insurance and inspection	£454-18-8.
(*c*) Total c.i.f. price	Rs. 58,226-6-4.
(*d*) Rate of exchange	1*s*. 8*d*.
(*e*) Custom's duty	Rs. 1,761-15-0.
(*f*) Landing and Port charges	Rs. 217-3-9.
(*g*) 1. Labour, etc.	Rs. 1,073-0-0.
2. Stores	Rs. 267-0-0.
3. Supervision, overhead charges, etc.	*Nil*.
(*h*) Total cost (in rupees)	Rs. 61,545-9-1.

0-6-0 Type Goods Engine and Tender.

(*a*) Price f.o.b.	£4,645-14-4.
(*b*) Freight, insurance and inspection	£491-10-3.
(*c*) Total c.i.f. price	Rs. 61,641-15-5.
(*d*) Rate of exchange	1*s*. 8*d*.
(*e*) Custom's duty	Rs. 1,797-14-0.
(*f*) Landing and Port charges	Rs. 257-0-10.
(*g*) 1. Labour, etc.	Rs. 1,594-0-0.
2. Stores	Rs. 547-0-0.
3. Supervision, overhead charges, etc.	*Nil*.
(*h*) Total cost (in rupees)	Rs. 65,837-14-3.

4-6-0 Type Passenger Engine and Tender (Completely erected).

(*a*) Price f.o.b.	£6,909-8-0.
(*b*) Freight, insurance and inspection	£857-5-10.
(*c*) Total c.i.f. price	Rs. 93,200-5-2.
(*d*) Rate of exchange	1*s*. 8*d*.
(*e*) Custom's duty	Rs. 2,621-3-0.
(*f*) Landing and Port charges	Rs. 1,052-5-4.
(*g*) 1. Labour, etc.	Rs. 86-0-0.
2. Stores	Rs. 247-0-0.
3. Supervision, overhead charges, etc.	*Nil*.
(*h*) Total cost (in rupees)	Rs. 97,206-13-6.

4-6-2 Type Passenger Engine and Tender.

(*a*)	Price f.o.b.	£7,456-2-0.
(*b*)	Freight, insurance and inspection . .	£695-6-2.
(*c*)	Total c.i.f. price	Rs. 97,816-14-5.
(*d*)	Rate of exchange	1*s.* 8*d.*
(*e*)	Custom's duty	Rs. 2,852-15-0.
(*f*)	Landing and Port charges	Rs. 329-11-9.
(*g*)	1. Labour, etc.	Rs. 1,955-0-0.
	2. Stores	Rs. 465-0-0.
	3. Supervision, overhead charges, etc. .	*Nil.*
(*h*)	Total cost (in rupees)	Rs. 1,03,419-9-2.

Enclosure No. 1.

Copy of letter No. 214-S.-1, dated 16th June 1926, from the Secretary, Railway Board, Simla, to the Agent, E. I. Railway, Calcutta.

Questionnaire regarding locomotives.

With reference to the questionnaire regarding locomotives issued by the Tariff Board, I am directed to inform you that the Railway Board will reply to questions 2, 3 (*c*), 4, 5, 6, 7, 8 and 9, and I am accordingly to request that you will refrain from answering these questions.

2. I am also to request that you will supply the Board with a copy of the replies to such questions as are answered by you.

Enclosure No. 2.

Copy of telegram No. 214-S.-1, dated 24th June 1926, from the Secretary, Railway Board, Simla, to the Agent, E. I. Railway, Calcutta.

" 214-S.-1. Continuation my 214-S.-1, sixteenth questions 4 and 5 for period prior to being taken over by State should be answered direct by you to the Tariff Board."

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8. GREAT INDIAN PENINSULA RAILWAY.

(*1*) *Letter, dated the 24th June 1926.*

Herewith six copies of the answers of this Administration. I have been instructed by the Railway Board that they will reply to questions Nos. 2, 3 (*c*), 4, 5, 6, 7, 8 and 9, and therefore I should not do so.

Answers to questionnaire issued by the Tariff Board with their letter No. 334, dated the 4th June 1926.

LOCOMOTIVES.

1. We have no metre gauge. We have 1,262 broad gauge engines, the types of which are set out in the attached statement.

2. The Railway Board will answer this.

3. (*a*) Requirements for—

1923-24	31 D-5 type (4-6-0). 27 H-5 ,, (2-8-0).
1924-25	*Nil.*
1925-26	*Nil.*

(*b*) Requirements for 1926-27 { Branch Line Passenger type (4-6-2)—2; Light ,, ,, ,, (4-6-2)—9; Heavy ,, ,, ,, (4-6-2)—6; Light Goods type ,, ,, (2-8-2)—7

(*c*) The Railway Board will answer this.

4. The Railway Board will answer this.
5. The Railway Board will answer this.
6. The Railway Board will answer this.
7. The Railway Board will answer this.
8. The Railway Board will answer this.
9. The Railway Board will answer this.

Statement showing the numbers and broad gauge types of engines on the Great Indian Peninsula Railway.

Tender or Tank.	Type.	Class.	Number owned.	Tender or Tank.	Type.	Class.	Number owned.
Tender . .	A-1	4 4 0	30	Tender .	D-3 M	4 6 0	15
,, .	A-2	4 4 0	40	,, .	D-4	4 6 0	50
,, .	A-3	4 4 0	4	,, .	D-5	4 6 0	31
,, .	B-1	4 4 0	10	,, .	E-1	4 4 2	5
,, .	B-2	4 4 0	34	,, .	F-1	2 6 0	35 5
,, .	C-1	4 4 0	48	,, .	F-2	2 6 0	10
,,	D-2	4 6 0	38	,, .	F-3	2 6 0	14
,, ..	D-3	4 6 0	13	,, .	F-4	2 6 0	62
,, .	G-2	2 6 0	5	,, .	R-2	2 6 0	7
,, .	H-1	2 8 0	15	,, .	S-1	2 6 0	5
,, .	H-2	2 8 0	54	,, .	T-1	2 6 0	10
,, .	H-3	2 8 0	33	,, .	U-1	0 4 2	5
,,	H-4	2 8 0	158	,, .	V-1	0 6 2	12
,,	H-5	2 8 0	27	,,	W-1	0 8 0	14
,,	J-1	2 6 0	72	,, .	W-2	0 8 0	5
,,	K-1	0 6 0	3	,, .	W-3	0 8 0	8
,, .	K-4	0 6 0	10	,,	X-1	0 6 2	19
,, .	K-5	0 6 0	58	,, .	Y-1	2 8 4	10
,, .	K-6	0 6 0	10	,, .	Y-2	2 8 4	41
,, .	K-7	0 6 0	46	,, .	Y-3	0 8 4	16
,, .	K-8	0 6 0	51	,, .	Y-4	0 8 4	15
,, .	N-1	2 10 0	30	Tank shop engines . .			6
,, .	O-1	0 6 0	35	Tender shop engine . . .			1
Tank . .	P-1	2 6 2	12				
,, . .	R-1	2 6 0	5			TOTAL .	1,262

(2) *Letter from the Great Indian Peninsula Railway Company, Limited, dated the 15th July 1926.*

In continuation of my letter, dated 24th June 1926, and under instructions received from the Railway Board in their telegram No. 214-S.-1, dated the 24th June 1926, I beg to forward six copies of the answers of this Administration to questions 4 and 5 for the period from the year 1922-23 to the date on which this Railway was taken over by the State, namely, the 1st July 1925.

Answers Nos. 4 and 5 of the questionnaire issued by the Tariff Board with their letter No. 334, dated the 4th June 1926, for the period from the year 1922-23 to the 1st July 1925, namely, the date on which this Railway was taken over by the State.

LOCOMOTIVES.

Question No. 4.

Please furnish the Board with a statement containing the following particulars as regards the purchase by you since 1922-23 of each type of locomotive:—

(1) *Date on which tenders were opened.*

(2) *Type of locomotive for which tenders were sent in and whether broad or metre gauge.*

(3) *Number of units of each class stated in the call for tenders.*

(4) *The tenders received.*

(5) *The price at which and other conditions subject to which the order was placed and the name of the firm to which it was given.*

(6) *The number of units for which the order was actually placed.*

N.B.—*If the locomotives are not received complete and ready to run, please state exactly what additions have to be made to the price quoted in the tenders in order to arrive at the price of the complete locomotive.*

Answer No. 4.

(1) The date on which tenders were opened is not known in India, as calls were issued and tenders opened by Messrs. Robert White and Partners, London, Consulting Engineers to the late Great Indian Peninsula Railway Company.

(2) The Great Indian Peninsula Railway has no metre-gauge. The types a broad-gauge locomotives for which tenders were sent in are not known in India, but the types of those for which tenders were accepted were as follows:—

Locomotive, Goods, 2-8-0 types, H-5 class, fitted with superheaters and double bogie, 4,500-gallon tenders, and including spare parts and complete sets of drawings and photographic views and diagrams:—

Fitted for coal-burning.

Fitted for oil-burning with oil-fuel fittings complete.

Locomotive, Passenger 4-6-0 type, D-5 class, fitted with superheaters, with six-wheeled 4,000-gallon tenders, and including spare parts and complete sets of drawings and photographic views and diagrams:—

Fitted for coal-burning.

Fitted for oil-burning with oil-fuel fittings complete.

(3) The number of units in the calls for tenders is not known in India, but the locomotives supplied were as detailed below:—

Number of locomotives	*Type.*
12	H-5 (coal).
15	H-5 (oil).
16	D-5 (coal).
15	D-5 (oil).

(4) The particulars of tenders received are not available in India.

(5) The prices and conditions of supply were as follows:—

Type.	Price each f. o. b. English Port.	Firms to which orders were given.
	£	
H-5 (coal)	6,000	The Vulcan Foundry Company.
H-5 (oil)	6,280	
D-5 (coal)	5,755	The North British Locomotive Company.
D-5 (oil)	5,855	

These locomotives were built to specifications and conditions issued by Messrs. Robert White and Partners, London, Consulting Engineers to the late Great Indian Peninsula Railway Company, of which there are no copies in India.

(6) The number of units for which orders were actually placed are set out in item (3) above.

N.B.—The N.B. to Question No. 4 has had attention in Answer No. 5.

Question No. 5.

With reference to clause (5) of Question No. 4 please give the particulars of the prices quoted in the following form:—

(*a*) *Price f.o.b. port (in sterling).*

(*b*) *Freight-insurance and freight-brokerage (in sterling).*

(*c*) *Total c.i.f. price (in rupees).*

(*d*) *Rate of exchange taken for conversion purposes.*

(*e*) *Customs duty (in rupees).*

(*f*) *Landing, wharf and port charges (in rupees).*

(*g*) *Estimated cost of erection (in rupees) in the following form:—*

1. *Labour, etc.*
2. *Stores.*
3. *Supervision overhead charges, etc.*

(*h*) *Total cost (in rupees).*

Answer No. 5.

(*a*) The price (in sterling) f.o.b. English port is given in item (5) of Answer No. 4.

(*b*) The freight-insurance and freight-brokerage (in sterling) were as follows:—

	£
H-5 (coal)	752
H-5 (oil)	782
D-5 (coal)	683
D-5 (oil)	703

(*c*) The total c.i.f. price:—

	Rs.
H-5 (coal)	1,01,280
H-5 (oil)	1,05,930
D-5 (coal)	96,570
D-5 (oil)	98,370

(*d*) The rate of exchange taken for conversion purposes was Rs. 15 equal to £1.

(*e*) Customs duty in rupees was paid on the 16 D-5 type and on the 27 H-5 type amounting to Rs. 97,702 and Rs. 1,77,770 respectively in 1923-24, but this was refunded in March 1925. On the 15 D-5 (oil) no customs duty was paid.

(*f*) The landing, wharf and port charges were as follows:—

	Rs.
H-5 (coal)	3,040
H-5 (oil)	3,175
D-5 (coal)	2,906
D-5 (oil)	2,951

(*g*) The estimated cost of erection in rupees was as follows:—

Labour—	Rs. Each.
H-5 (coal)	1,083
H-5 (oil)	1,083
D-5 (coal)	902
D-5 (oil)	926

Stores—	Rs. Each.
H-5 (coal)	1,394
H-5 (oil)	1,822
D-5 (coal)	1,163
D-5 (oil)	1,659

Supervision—	Rs. Each.
H-5 (coal)	481
H-5 (oil)	481
D-5 (coal)	401
D-5 (oil)	412

(*h*) The total cost (in rupees) is as under:—

	Rs. Each.
H-5 (coal)	1,07,278
H-5 (oil)	1,12,491
D-5 (coal)	1,01,242
D-5 (oil)	1,07,949

9. MADRAS AND SOUTHERN MAHRATTA RAILWAY COMPANY, LIMITED.

(1) Letter, dated the 28th June 1926.

LOCOMOTIVE QUESTIONNAIRE.

With reference to your No. 334 of the 4th June 1926, I have the honour to forward herewith my replies to the questionnaire relating to locomotives.

As regards clauses (5) and (6) of question 4, a statement is attached, which gives particulars regarding locomotives ordered from 1922-23 to 1925-26 as available at present.

The remaining particulars are being gathered and a complete statement will be sent as soon as possible.

Replies to questionnaire.

LOCOMOTIVES.

Your No. 334 of 4th June 1926.

1. (*a*)

294 Broad Gauge Engines. 322 Metre Gauge Engines.

1. (*b*)

Broad Gauge.

Type.	No.	
H	4	To be abolished gradually.
J	23	
K	18	
L	14	
M	55	
N	50	
S	9	To be abolished.
T	9	
U	13	
V	12	
W	38	
H P	2	Experimental.
H G	2	
C	6 Tank	These types are being abolished.
D	9 ,,	
E	11 ,,	
F	17 ,,	
C B	2	Motor Coach.

Metre Gauge.

Type.	No.	
F M	130	Old engines to be replaced by L. S. C. types.
P	50	
M	24	
M H	25	
G	70	
I	12	Ghat engines for W. I. P.
A M	2	
I M	6	
N	3	

2. All new engines are being ordered to L. S. C. standard types, with the exception of certain Broad Gauge Tank Engines. There is no L. S. C. standard Tank Engine.

3. Requirements since 1923-24 to end of latest quinquennial programme, 1931-32:—

	Broad Gauge.	*Metre Gauge.*	
1923-24	2 H. P.; 2 H. G. experimental.	5 M.	
1924-25	7 F.; 2 W.	3 P.; 4 G.	
1925-26	8 F.	9 G.; 2 L. S. C. 18.	
1926-27	12 F.	3 L. S. C. 17.	
1927-28	2 F.; 3 L. S. C. 14.	6 L. S. C. 18. 10 L. S. C. 30.	L. S. C. 17.
1928-29	7 L. S. C. 14.	4 L. S. C. 30.	NOTE.—Possibly L. S. C. 18 will be substituted for 30 and 16 for 17.
1929-30	.....	16 L. S. C. 30.	
1930-31	8 L. S. C. 14; 2 L. S. C. 12.	.....	
1931-32	.....	24 L. S. C. 30.	

4. (1) Engines obtained through Railway Board or Home Board—date of opening tenders not available here.

(2) See numbers and types for each year in reply to paragraph 3.

4. (3) As abcve.

(4) No particulars here.

(5) and (6). See attached sheet.

6. We don't build our own locomotives.

7. All orders for types standardised are Railway Board's and are included in the general call for tenders.

In 1922-23 we asked Railway Board to include	*Nil.*
In 1923-24	*Nil.*
In 1924-25	2 W.; 7 F. S.
In 1925-26	8 F. S.; 9 G.

8. When informed by the Railway Board that certain engines cannot be included in the general call for tenders, our Board advertise for tenders to be submitted in London.

9. (1) We can't answer this without inspecting the Peninsular Locomotive Company's Works.

(2) The plant available in the repair shops is used for manufacturing spares for stock when the number of engines in shops is small, *i.e.*, during the busy traffic season, when the largest number of engines possible must be kept out on line. Additional spares are purchased whenever it is considered most economical.

(3) Our requirements of spares vary greatly. When the requirements exceed what we can make economically in our repair shops, we purchase from outside firms.

(5) and (6).

Year.	Engine.	Gauge.	Contractors.	Cost of the order.	Freight on the order.	Total c. i. f. in Rs.	Rate of exchange.	Customs duty.	Landing charges.	Estimated cost of erection.			Total cost on line.
										Labour.	Stores.	Suspense.	
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.			l.
				£	£ s. d.								
1922-23 .	2 W.	B. G.	W. Beardmore & Co., London.	10,300	1,084 14 0	...	...	...	...	...	...	...	...
1923-24 .	2 H. P. 2 H. G.	B. G.	Baldwin & Co., America	30,596	4,000 0 0	...	...	...	...	...	...	...	...
	5 N.	M. G.	Germany . . .	14,500	915 19 0	...	...	...	...	...	...	...	...
1924-25 .	3 W.	B. G.	Vulcan Foundry, Ld., London.	13,504	921 5 10	...	...	...	...	...	...	...	...
	7 F. S.	B. G.	Keer Stuart & Co., London.	37,926	2,452 14 0	...	...	...	..	...	...	...	...
	3 P. S.	M. G.	Hanover Locomotive Co., Germany.	6,984	579 0 10	...	...	...	...	...	...	...	...
	2 G. S.	M. G.	W. G. Bagnall & Co., London.	9,890	514 4 8	...	...	...	...	...	...	...	..
	2 G. S.	M. G.	Do. . .	9,890	514 14 7	...	...	...	...	...	...	...	...
1925-26 .	9 G. S.	M. G.	Do. . .	43,830	2,330 7 0	...	...	...	...	...	...	...	...
	8 F. S.	B. G.	Germany . . .	33,200	2,695 3 0	...	...	...	...	...	...	...	...

N. B.—Received ready to run.

(2) *Letter from the Madras and Southern Mahratta Railway Company, Limited, dated the 16th July 1926.*

Referring to the last paragraph of this office No. W.-4383-A-III of the 28th June 1926, I have the honour to forward herewith a complete statement of particulars of locomotives ordered from 1922-23.

Enclosure.
4 (5) and (6).

Year.	Engine.	Gauge.	Contractors.	Cost of the order.	Freight on the order.	Total G. I. F. in Rs.	Rate of Exchange.	Customs duty.	Landing charges.	Estimated cost of erection.			Total cost on line as far as available.
										Labour.	Stores.	Suspense.	
a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.			l.
				£	£ s. d.	Rs.	per R.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1922-23	2 W.	B. G.	W. Beardmore & Co., London	10,300	1,084 14 0	1,59,420	1s. 5½d.	...	6,345	480	1,588	...	1,67,801
1923-24	2 H. P. 2 H. G.	B. G.	Baldwin & Co., America	30,596	4,960 0 0	4,86,036	1s. 5⅛d.	12,354	26,273	7,895	3,817	...	5,36,375
Do.	5 M.	B. G.	Germany	14,500	915 19 6	2,06,268	1s. 5½d.	5,416	5,513	4,900	687	...	2,22,729
1924-25	2 W.	B. G.	Vulcan Foundry Ltd., London	13,594	921 5 10	1,89,509	1s. 5½d.	4,857	9,940	2,508	1,443	*217	2,08,465
Do.	7 P. S.	B. G.	Keer Stuart & Co., London	37,926	2,452 14 0	5,36,854	1s. 6⅜d.	13,575	23,932	9,057	3,829	*884	5,88,135
Do.	3 P. S.	B. G.	Hanover Locomotive Co., Germany	6,984	579 0 10	1,00,578	1s. 6½d.	2,696	1,838	1,497	458	*137	1,07,204
Do.	2 G. S.	M. G.	W. G. Bagnall & Co., London	9,890	514 4 8	1,39,940	1s. 5⅝d. 1s. 5¼d.	3,352	1,016	1,304	900	*154	1,46,666
Do.	2 G. S.	,,	Ditto ditto	9,890	514 14 7	1,40,296	1s. 5⅝d.	3,360	856	1,285	669	...	1,47,016
1925-26	9 G. S.	,,	Ditto ditto	43,830	2,330 7 0	6,17,226	1s. 5⅜d. 1s. 6½d. 1s. 5⅝d.	15,883	...†	5,870	4,050	...	6,43,029‡
Do.	8 F. S.	B. G.	Germany	33,200	2,695 3 0	4,76,816	1s. 6½d.	11,502	...†	10,389	4,370	*258	5,05,336‡

N.B.—Received ready to run.
Column (j) represents further charge such as cost of drawings or tracings, analysis and tests charges, inspection charges, etc.
Landing charges are debited to Revenue direct.
* Represents indirect charges.
† Further charges expected.
‡ Work not completed. Full debits not yet received.

10. NORTH WESTERN RAILWAY.

Letter dated the 29th June, 1926.

I beg to send herewith 7 copies of answers to questions Nos. 1, 3(*a*), 3 (*b*) of the questionnaire regarding Locomotives. The remaining questions, *viz.* 2, 3 (*c*), 4, 5, 6, 7, 8 and 9, will be answered by the Railway Board.

ANSWER No. 1.

Broad Gauge 5'-6".				Narrow Gauge 2'-6".			
Class of Engine.	Type.	Total No. on Line.	Remarks.	Class of Engine.	Type.	Total No. on Line.	Remarks.
H. P.	4-6-0	40		A	2-8-4	7	
H. P/S	4-6-0	19					
G. P.	4-4-2	4		B	0-4-2	9	This includes one engine on the surplus list.
A. P.	4-4-2	5					
S. P.	4-4-0	99					
S. P/S	4-4-0	80		C	0-6-2	6	
M.	4-4-0	41					
P.	2-4-0	32	Obsolete non-standard type engines out of these 6 engines are on the surplus list.	D	0-6-2	2	
				E/2	2-4-2	2	Obsolete type engines.
H. P.	4-4-0	25	Ditto out of these 4 engines are on the surplus list.	F	0-8-4	1	
P. T.	2-6-4	25					
H. G.	2-8-0	169		G	2-8-2	22	
H. G/S.	2-8-0	133					
M. G.	4-6-0	5		G/S	2-8-2	7	
S. G.	0-6-0	318					
S. G/S	0-6-0	213		H	2-6-2	2	
K. R.	0-6-0	22	Obsolete non-standard type engines.				
H. L.	4-6-0	69	Obsolete non-standard type engines.	J	0-6-2	3	
L. L.	4-6-0	86	Ditto out of these 37 engines are on the surplus list.	K	2-6-2	24	
T. G.	0-6-0	6	Obsolete non-standard type engines.				
S. T.	0-6-2	47		K/2	2-6-2	4	
T. A.	2-8-2	4					
T. A. A.	2-8-2	7		N	4-6-2	5	
M. A/S.	2-6-6-2	1					
H. S. T.	2-8-2	5		S	2-6-2	5	
G. A. S.	2-6-2&2-6-2	1					
Total	...	1,456		Total	...	99	

ANSWER No. 3(*a*).

Capital Account.		Revenue Account.		
No. ordered during the year.	Year in which actually received.	No. ordered during the year.	Year in which actually received.	Remarks.
		Orders placed against 1923-24.	*5'-6" Gauge.*	
15 H. G/S (2-8-0 type) Superheater Locomotives.	1923-24	30 H. G/S (2-8-0 type) Superheater Locomotives.	1923-24.	
		5 H. P/S (4-6-0 type) Superheater Locomotives.	1924-25.	
		5 H. S. T. (2-8-2 type) Locomotives.		
		Orders placed against 1924-25.	*5'-6" Gauge.*	
		One Garratt (2-6-2 & 2-6-2 type) Articulated Locomotives.	1925-26	Received on ordinary Revenue account (for trial purpose).
		Orders placed against 1925-26.	*5'-6" Gauge.*	
		Nil.		

ANSWER No. 3(*b*).

Capital Account.		Revenue Account.		Remarks.
No. ordered during the year.	Year in which actually received.	No. ordered during the year.	Year in which actually received.	
		5'-6" Gauge.		
		Two (2-8-2 type) new standard Heavy Goods Locomotives.	Not yet received.	
		Two (4-6-0 type) new standard Heavy Passenger Locomotives.		
		Two (4-6-2 type) new standard Branch line Locomotives.		
		2'-6" Gauge.		
		Two (2-8-2 type) new standard Heavy Goods Locomotives.	Not yet received.	
		Two (2-6-2 type) new standard Intermediate Passenger Locomotives.		

11. SOUTH INDIAN RAILWAY COMPANY, LIMITED.

Letter, dated 28th June 1926.

I have the honour to subjoin my replies to the questionnaire enclosed with your letter No. 334, dated the 4th June 1926.

1. Total number of locomotives used by this Railway.

Metre Gauge	367
Broad Gauge	149

Main types.

Metre Gauge—

4-6-0 type Standard Passenger (M Class) . . .	57
4-6-0 type Standard Mixed Traffic (B class) . . .	113
4-6-4 type Tank (M. T. class)	8
4-8-0 type Standard Goods (S. G. class)	10

Broad Gauge—

0-6-0 type Goods (K class)	57
4-4-0 type Passenger (T class)	33
4-6-0 type Standard Passenger (S. P. class) . . .	13

2. Certain types of locomotives have so far been designed and they are under trial. It is not possible to say at this stage the actual types that will be adopted on this Railway.

3. (*a*) Requirements of each type of locomotive since 1923-24 are given in the statement attached.

(*b*) Requirements in 1926-27.

	M.G.	B.G.
4-6-0 Standard Mixed Traffic . . .	18	—
0-6-0 Goods	—	8

(*c*) Requirements for 5 years subsequent to 1926-27.

——	1927-28.		1928-29.		1929-30.		1930-31.		1931-32.	
	M.G.	B.G.	M.G.	B.G.	M.G.	B.G.	M.G.	B.G.	M.G.	B.G.
4-6-2 Main Line—										
Light pass. .	6	2	...	...	3	4	2	2	...	2
2-8-2 Main Line—										
Light Goods .	10	2	9	9	10	11	6	...	...	...

4. The number obtained in each of the years and the firm from which they were obtained is given against item (3). As the calling for tenders and

entering into contracts are dealt with by the Home Board, the information asked for is not available. The tenders are for only f.o.b. prices and the locomotive have to be erected in India after receipt.

5. The prices of the various types of locomotives will be as under:—

	M.G.		4-6-4 Tank.	4-8-0 Goods.	B.G.	
	4-6-0 Type Pass.	4-6-0 Type Mixed.			4-6-0 Type Pass.	0-8-0 Type Goods.
	£	£	£	£	£	£
F.o.b. price as per tender.	3,625	3,550	3,250	3,947	6,265	4,545
Freight, Insurance, etc.	216	222	211	286	555	350
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Total c.i.f. price converted at 1s. 6d. per Rupee.	51,213	50,267	46,147	56,440	90,933	65,267
Customs duty . .	1,280	1,257	1,154	1,410	2,273	1,632
Landing, etc. . .	1,277	1,256	1,149	1,410	2,274	1,631
Estimated cost of erection.						
Labour . . .	600	500	400	650	1,200	530
Stores . . .	200	200	250	200	500	250
General charges .	100	100	50	100	250	100
TOTAL COST .	54,670	53,580	49,150	60,210	97,430	69,410

6. No.

7. We have hitherto not obtained any of our locomotives through the Railway Board but in the Five Years' Programme from 1927-28 to 1931-32 we have informed the Railway Board that our requirements may be included in their combined annual call for tenders.

8. Indents are submitted by me to the Home Board who transmit the same to the Company's Consulting Engineers for preparing necessary specifications, etc. Tenders are then invited and contract let by the Home Board on their merits.

9. (*i*) I have no experience of the Peninsular Locomotive Company's works but it appears to me to be a reasonable statement that one factory will be unable to supply the requirements of all Indian Railways in the matter of spare parts.

(*ii*) Manufacture everything with the exception of steel forgings, castings, etc.

(*iii*) Prepared to consider the placing of orders for spare parts in this country provided the quality is good and price favourable.

Statement.

	1922-23.			1923-24.			1924-25.			1925-26.		
	No.	F.o.b. price.	Name of firm.	No.	F.o.b. price.	Name of firm.	No.	F.o.b. price.	Name of firm.	No.	F.o.b. price.	Name of firm.
		£			£			£			£	
M. G.												
4-6-0 Standard Pass . .	12	3,625	Vulcan Foundry.	..	...	...	...	...	...	...	...	..
4-6-0 Standard Mixed Traffic .	17	3,550	North British Loco. Co.	6	3,550	North British Loco. Co.	...		...	...	...	...
4-8-0 Standard Goods . .	10	3,947	Vulcan Foundry.	...	...	...	...	...	...	...	...	...
0-6-0 Goods (F. Class) . .	3	2,875	W. G. Bagnall, Ltd.	...	...	...	...	...	...	...	...	...
4-6-4 Tank	4	3,740	Nasmyth Wilson Co.	4	3,795	Nasmyth Wilson Co.	...	...	...	4	3,250	Hohen Zollern Loco. Co., Ltd. Dusseldor.
B. G.												
4-6-0 Standard Pass . .	...	...	...	2	6,265	North British Loco. Co.	...	...	...	...	...	...
0-6-0 Goods	...	...	...	5	4,545	Ditto.	...	...	...	...	...	...

In addition to the above 2 combined rack and adhesion engines 0—8—2 type were obtained for the Nilgiri Railway in 1924-25, from the Swiss Locomotive and Machine Works, Wintarthur at £6,650 each f.o.b. Antwerp.

XXV.—Correspondence in connection with certain allegations made by the Tata Iron and Steel Company, Limited, against the Palmer Group of Railways, regarding rail orders from those railways.

(1) *Letter from the Tariff Board, to the "Palmer" Group of Railways, dated the 7th June 1926.*

I am directed to forward a copy of a representation submitted to the Tariff Board by the Tata Iron and Steel Company in connection with the present statutory enquiry into the question of the continuance of protection to the Steel Industry and to invite attention to pages 7, 15 and 16 and to the note at slip A headed "Rail orders from the Palmer Group of Railways" where that company makes various allegations against the Palmer Railways. I am to say that the Board proposes to examine the representatives of the Tata Iron and Steel Company on these allegations in the course of the preliminary examination of the Company, which begins on the 14th instant, and to send to you relevant extracts from the evidence recorded. In order that the Tariff Board may be in possession of facts which may assist it in appreciating the point of view of the Palmer Railways, I am to request that you will be so good as to furnish the Board, in the first instance, with a written statement explaining the various points raised in the representation and the evidence of the Company. After the Board has received your written statement it may be desirable for the Board to examine the Agents of some of the Palmer Railways sometime between the 1st and the 15th of August, 1926, definite dates being fixed later. I am to ask if it would be convenient for you to appear before the Board in Calcutta at about that time in the event of such an examination being found necessary.

2. I am also to say that the Board would be glad if you would kindly inform it whether your consulting engineers have any representatives in India.

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(2) *Letter, dated the 24th June 1926, from the Agent of the Madras and Southern Mahratta Railway Company, Limited, to the Secretary, Tariff Board.*

PROTECTION TO STEEL INDUSTRY.

I have the honour to acknowledge receipt of your letter No. 340, dated the 7th June 1926, regarding the representation of the Tata Iron and Steel Company, Limited, in connection with the present statutory enquiry into the question of the continuance of protection to the Steel Industry in India. I may mention that your letter was received in my office on the 11th instant, and due to my absence from Madras I have not been able to give it earlier attention.

I must explain that the matter is of great importance, and I am therefore unable to place before you an authoritative written statement without the approval of my Board.

I, however, forward for the information of the Tariff Board a copy of the draft statement which I have sent for my Board's approval. Until this statement is approved by my Board it must be understood that it represents only my personal views in the matter, and should not be considered as an official statement of the views of this Railway Company.

I much regret that I shall be unable to give evidence in Calcutta on the dates you mention, but I shall be pleased to do so on any date between the 19th and the 21st August 1926, if this will suit the Tariff Board's convenience.

Written statement of the acting Agent of the Madras and Southern Mahratta Railway Company, Limited, in connection with the representation of the Tata Iron and Steel Company, to the Tariff Board, regarding the continuance of protection to the Steel Industry in India.

The six year agreement between the Madras and Southern Mahratta Railway Company, Limited, and the Tata Iron and Steel Company, Limited, was entered into at the suggestion of the Steel Company and in the interests of the industrial development of India desired by Government.

In 1918 similar contracts were negotiated by Mr. Palmer for several railways. These contracts were for supplies commencing in April 1920 covering a period of six years. Under their contract the Madras and Southern Mahratta Railway undertook to obtain the whole of their requirements from the Tata Iron and Steel Company up to the limit of the Steel Company's capacity to supply. The accompanying table shows that for no year were Messrs. Tatas able to supply our full requirements and the railway had to make contracts for supply from Europe; a portion of the requirements being obtained at abnormally high prices.

In 1922 Messrs. Tatas represented that the actual cost of manufacture was Rs. 158-14-0 per ton, and asked for an enhancement of the rate of Rs. 122-8-0 per ton settled under the terms of the six year contract. The representation of the Steel Company was examined by our Consulting Engineers and considered by my Board who were of opinion that no case had been made out for altering the rate in the original contract, and though the rate of Rs. 122-8-0 did not cover a full share of overhead cost, it more than covered actual working cost.

Our experience generally with long period contracts was unsatisfactory. In such contracts when market prices rise contractors claim a revision and when prices fall, as in the case of coal, the railway loses. On the completion of the six year contract, it was decided therefore to revert to the practice of making annual contracts. In pursuance of this decision, tenders were called for from the Tata Iron and Steel Company, Limited, in England for the supplies required in 1926-27.

We are at present using rails at four points, between Waltair and Rajahmundry, between Arkonam and Jalarpet, between Guntakal and Donakonda and between Poona and Miraj. On receipt of the English and Indian quotations and after adding in each case the cost of bringing the rails to site and in the case of English rails the import duty, it was found that Messrs. Tatas rails were the most economical at the first of these sites while English rails imported *viâ* Madras and Mormugao were the most economical at the other points.

The Tata Iron and Steel Company, Limited, as manufacturers have considered the price *ex*-works; as consumer the railway must consider the price at the point where rails will be used. Parts of the Madras and Southern Mahratta Railway system are at a great distance from Messrs. Tatas works involving heavy transport charges, but these points are close to sea ports.

This railway does not run through such wealthy countries as many of the railways in the North and to provide adequate service at rates suited to the district served it is essential that the railway be laid and worked as economically as possible. If the Railway is penalised for its geographical position at a distance from Tatas while deprived of the advantage of its geographical position close to important sea ports, this would, in the course of time, react on rates and prejudice the marketing of other of Messrs. Tatas Steel products in the south.

It appears that Messrs. Tatas have recognised the desirability of equalising the cost of rails at the point of consumption, and it is noted from their evidence that the Burma Railways are offered rails at Rs. 100 per ton while the offer to this Railway was at the rate of Rs. 105 per ton. Had the lower rate been offered to this line, it would have had an important effect on the comparative prices of English and Indian rails delivered at site. There would

appear to be no reason why the average selling price ex-works should not be maintained, while securing orders for rails required at distant points by carrying this principle of considering actual cost to the consumer still further.

A further point which may be considered is that a large portion of this railway's present demand is exceptional; in part to make up for arrears occurring in the war period and in part to provide for a policy of increasing the capacity of the Railway by introducing heavier axle load, a very large programme of relaying has been undertaken within the last five years. The rails now being put in should last for 40 years, while all important sections will de relaid within the next 10 years. On completion of the present programme, there will be a long period during which the requirements of the railway will be small.

As regards quality the real test is wear, and we can say very little till the rails have been in the track some 20 years. When first laid there were indications of a more pronounced wear in Tatas rails than in English rails and we have had trouble owing to irregularity in section. We have accepted Tatas rails for delivery in the current year for relaying between Waltair and Rajahmundry; it is considered this is sufficient answer to Tatas statement that their rails are being condemned on account of process of manufacture. A statement showing breakages of Tatas and Home rails 90 and 60 lbs., during the last five years ending 31st March 1926 is enclosed. It will be noted that in all but 3 cases, they are stock rails, and this probably is accounted for by the special processes these rails are put through in making them in sets of points. In the other 3 cases 2 are Tatas and 1 Home rail.

In conclusion, with the protection afforded at present Messrs. Tatas rails can compete with foreign rails at a point about as far south as Gudur. A reduction of some Rs. 5 per ton in the price offered to this railway would enable them to compete at all points on the Broad Gauge.

Messrs. Tatas have been unable up to the end of 1925 to supply the full requirements of this railway; the present requirements of this railway are abnormally large. From the experience available, it is considered probable that Tatas rails will not wear as well as English rails. From Messrs. Tatas evidence they would appear to contemplate that more than one steel factory which would roll rails in India would develop in the future. It is to be hoped that of these future factories one will be in the south, in which case Messrs. Tatas sphere of influence would have about the same southern limit that it has to-day. Unless it is contemplated that Messrs. Tatas should have an absolute monopoly all over India, there would appear to be no reason for enhancing duties, so that Messrs. Tatas can compete at the points furthest from their work. The present duty enables Messrs. Tatas to compete with foreign rails over a very wide area, the fact that imported rails may be cheaper close to Ports when foreign prices are low, introduces a desirable factor of competition.

Rails ordered and supplied by Messrs. Tata Iron and Steel Company under the six years contract.

Bull headed	90 lbs.
Flatfooted	90 lbs.
Flatfooted	60 lbs.

	1920-21 Tons.	1921-22 Tons.	1922-23 Tons	1923-24 Tons.	1924-25 Tons.	1925-26 Tons.
Railway requirement . .	9343·17	9909·33	12788·18	13826·38	19252·41	15872·851
Quantity supplied	3155·6448	6134·63	8635·47	6559·1375	17624·6775	15468·047
Shortage . .	6187·5252	3774·70	4152·71	7267·2425	1627·7825	404·807

Statement showing breakages of Tatas and Home rails 90 lbs. and 60 lbs. during the last 5 years ending 31st March 1926.

Official years.	Description of rails broken.	Length of each rail.	Tatas.	Home.	Date laid.	Date broken.	Remarks.
1925-26	Left hand stock rail 60 lbs. F. F.	30′—4⅜″	Tatas	...	December 1923	1-10-1925	Due to flaw in metal.
	R. H. stock rail 90 lbs. F. F.	30′—0″	Do.	...	27-5-20	16-9-1925	Due to an old fracture in the web of the rail.
	60 lbs. F. F. Steel rail	36′—0″	Do.	...	20-6-25	4-7-1925	Cracked at one end between bottom flange and web.
	L. H. stock rail 60 lbs. F. F.	30′—4⅜″	Do.	...	December 1923	1-10-1925	Due to flaw in metal.
	R. H. stock rail 90 lbs. F. F.	30′—0″	Do.	...	27-5-20	16-9-1925	Due to an old fracture in the web of the rail.
1924-25	Rail 90 lbs. F. F.	40′—0″	...	Home	1920	30-4-1924	Breakage is due to flaw in metal (1 ft. long by 2½″).
1923-24	R. H. stock rail 90 lbs. F. F.	30′—0″	Tatas	...	17-4-23	13-11-1923	Defect of manufacture.
	Stock rail 90 lbs. F. F.	30′—0″	Do.	...	17-4-23	17-7-1923	Flaw in bottom flange and web of rail.
	L. H. stock rail 60 lbs. F. F.	30′—4¾″	Do.	...	23-12-23	23-12-1923	Crack occurred where stock rail has been cut to house the switch.
1922-23	Rail 90 lbs. F. F.	40′—0″	Do.	...	1920	13-3-1922	Old flaw in the rail (8″ from end of the rail).
1921-22	*Nil*	...	...	...	...	...	.....

(3) *Letter from the Madras and Southern Mahratta Railway Company, Limited, dated the 18th August 1926.*

In continuation of this office No. M.-730, dated the 24th June 1926, I have the honour to state that my Board approve generally of the draft statement submitted with the above quoted letter.

My Board state further that the statement in Tatas representation to the effect that simultaneous tenders were not called for is inaccurate, at least as far as this Railway is concerned. Messrs. Tatas London Branch were given all particulars and the time for delivery of tenders was arranged to suit them and give them time to obtain quotations from India.

Messrs. Tatas were unable to promise any delivery of rails to this Railway before the 1st December 1926, whereas British quotations were for delivery before the 1st August. It was this serious delay in delivery which would have adversely affected a large portion of our programme of work, which proved the decisive factor in influencing my Board to recommend that a large portion of our supplies should be obtained from other sources than in India.

The Palmer Group could not agree to the suggestion that any concessions in prices given to lines furthest from Tatas Works should be borne in some way by those lines nearer Tatanagar. Should the Indian Firm see fit to tender cheaper rates for longer distances from the source of manufacture, this Company of course would raise no objection, but the situation, it is considered, is better met by simultaneous tenders from India, Great Britain and the Continent being obtained relative cost thus made becoming known.

My Board further state that there is no foundation for the statement put forward by Messrs. Tata that the Indian Industry has not been treated fairly, in so much as their quotations have from time to time merely been used by the Palmer Group in order to obtain lower prices in England from English Manufacturers. On the contrary Messrs. Tata had the advantage of being in possession of latest British prices and were able to vary their offers accordingly.

As regards quality, my Board are of opinion under expert advice received that the quality of Rails supplied up to date has not been equal to British Rails.

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(4) *Letter from the Assam Bengal Railway Company, Limited, dated the 29th June 1926.*

With reference to your letter No. 389, dated 7th June 1926, regarding the representation submitted to the Tariff Board by Messrs. The Tata Iron and Steel Company, I regret to say that I am not in a position to be able to explain the various points raised in the representation of the Company. No copy of the evidence given by the Company to the Tariff Board has been received by me.

As moreover this Railway have not purchased any rails from England during the past two years I am unable to compare English prices quoted by the Company against actual purchases made in England. I do not therefore think any evidence that I could give would be of any assistance to the Tariff Board.

The Consulting Engineers for the Assam Bengal Railway are Messrs. Rendel, Palmer and Tritton, who have, as far as I am aware, no representative in India.

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(5) *Letter from the Bombay, Baroda and Central India Railway Company, dated the 29th June 1926.*

In reply to your letter No. 342 of 7th June 1926, I have to offer the following remarks on the specific points referred to by you on the subject of the

supply of rails by the Tata Iron and Steel Company and mentioned on paragraphs 7, 15 and 16 and in the Note on the "Rail Orders from the Palmer Group of Railways" of the printed representation of the Tata Iron and Steel Company.

Page 7.—This Railway has accepted the Tata Iron and Steel Company's offer of rails at Rs. 105 per ton for 1925-27 after reference to the Board of Directors in London. I have no information of the details of any comparison of the probable cost of obtaining the rails elsewhere.

Pages 15-16.—As stated above, we have ordered our rails from Tatas for 1926-27 and I have no information of the details of English prices. No rails have been purchased other than from Messrs. The Tata Iron and Steel Company by this Railway for some years. It does not seem unreasonable that a lower price should be quoted for a single large order as compared with the average of orders for a year and I cannot see any proof of "dumping" in figures quoted by Messrs. Tata Sons about which they appear to have no certain information.

Note on "Rail Orders from the Palmer Group of Railways."—The long term contracts with the Palmer Group of Railways were negotiated by Messrs. Tata Sons on their own initiative in London in 1918. I doubt whether it is correct to describe as a loss to the Steel Company the difference between the contract rates and other rates prevailing during the period of the contract. In any case, I do not understand how any comparison can be made between rates on a very big contract covering a period of six years and isolated contracts during that period.

I am not in a position to speak as to the negotiations between the Tata Iron and Steel Company and the Railway Board. Messrs. The Tata Iron and Steel Company's offer of rails for 1926-27 at Rs. 115 per ton was communicated to the Board of Directors in London and they considered it desirable to ascertain the price they would have to pay elsewhere and proposed to call for simultaneous tenders. Subsequently they received the revised offer of Rs. 105 and decided to accept it. I have no information as to the result of any enquiries made in London in this connection.

The Tariff Board will see that I am unable to give them much information in the matter of the points referred to me. Under the circumstances, the Board will probably agree that there will be little advantage in my going to Calcutta to give evidence. It will be difficult for me to spare the time to visit Calcutta but if the Board consider it essential that they should examine me I will do my best to be present in Calcutta on any day they may fix for the purpose, but shall be glad if ample notice can be given.

With reference to the last paragraph, I have to inform the Board that the Consulting Engineers of this Railway are Messrs. Rendel, Palmer and Tritton and they have no representatives in India.

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(6) *Letter from His Exalted Highness the Nizam's Guaranteed State Railways Company, Limited, dated the 6th July 1926.*

I have the honour to acknowledge receipt of your letter No. 338, dated the 7th June 1926, regarding the representation of the Tata Iron and Steel Company, Limited, in connection with the present statutory enquiry into the question of the continuance of protection to the Steel Industry in India.

2. I forward for the information of the Tariff Board a copy of the draft statement which I have sent for my Board's approval. Until the statement is approved of by my Board, it should not be considered as an official statement of views of this Railway Company.

3. The Consulting Engineers of this Railway are Messrs. Rendel, Palmer and Tritton and they have no representatives in India.

4. Mr. C. W. Lloyd Jones, C.I.E., Agent and Chief Engineer, who has been dealing with this subject, is now on leave in England and is expected to return to India about the beginning of October.

Written statement of the Acting Agent of His Exalted Highness the Nizam's Guaranteed State Railways Company, Limited, in connection with the representation of the Tata Iron and Steel Company to the Tariff Board regarding the continuance of protection to the Steel Industry in India.

The long term agreement between His Exalted Highness the Nizam's Guaranteed State Railways Company, Limited, and the Tata Iron and Steel Company, Limited, was entered into at the suggestion of the Consulting Engineers, Messrs. Rendel, Palmer and Tritton, who also carried out negotiations for the Bombay, Baroda and Central India and the Madras and Southern Mahratta Railways. The contract was for a period of six years from 1st April 1920 and the rates agreed upon for rails were:—

Rs. 122-8-0 per ton for 60 lbs. and upwards

and

Rs. 125-0-0 per ton for 40 lbs. to 59 lbs.

The main provisions of the agreement were:—

(1) The Railway Company to place all their orders for rails and fittings with the Steel Company who should use their best endeavours to supply the full requirements.

(2) Materials to be used for construction and maintenance of Company's lines and for maintenance only of feeder and branch lines owned by them and not for construction of such branch lines.

(3) Until the Steel Company's extensions were completed, if the output was below the total requirements of all the railways who had contracts with them, Railway Board to apportion.

(4) Railway Company to be free to obtain elsewhere what material the Steel Company did not expect to be able to supply in any year.

(5) Railway Company to accept 6 per cent. of short rails measuring 3 feet and 6 feet less than standard lengths.

NOTE.—This is unusual in the case of rails obtained from England.

The contract agreement was drawn up on the lines agreed by them with Mr. Palmer of Messrs. Rendel, Palmer and Tritton who specially visited India for the purpose, but the Tata Company delayed signing the agreement for a considerable time. In the course of correspondence during 1921 the Tata Company sent us for consideration a copy of their representation to the Madras and Southern Mahratta Railway Company for enhancement of the rate of Rs. 122-8-0 per ton agreed upon for rails. My Board, to whom the matter was referred, considered the matter jointly with the other railways of the Palmer Group who had similar contracts and to whom a similar representation had been made by Messrs. Tatas and decided that there was no reason for altering the rate originally agreed upon. In the meantime supplies were being made at the original rate.

We were given to understand by our Consulting Engineers who negotiated the contract that the intention of condition (*ii*) referred to above would include any new lines constructed by the Nizam's Guaranteed State Railways on behalf of His Exalted Highness the Nizam's Government. The Tata Iron and Steel Company, however, declined subsequently to confirm this.

The following statement compares the quantities of rails ordered during each year of the contract with the quantities actually supplied by the Tata Iron and Steel Company:—

Years.	Quantities indented for.	Quantities actually supplied.	Remarks.
1920-21	2,500	1,216	(*a*) Represents balances not supplied during the previous two years.
1921-22	3,500	2,000	
1922-23	2,700 (*a*)	2,685	(*b*) 1,538 tons in 1923-24. 562 ,, in 1924-25.
1923-24	7,000	2,100 (*b*)	
1924-25	2,100	...	(*c*) 748 tons represent the balance not supplied for 1923-24 after deducting quantity purchased from England.
	748 (*c*)	2,848	
Total .	15,100	10,844	

The renewal for which 7,000 tons were ordered in 1923-24 had to be urgently completed. Sleepers and other fittings were already at site and as there was no possibility of obtaining further supplies from Tatas during that year, 4,224 tons were obtained from England at a cost of Rs. 6,47,574. At the contract rate with Tatas the cost would have been only Rs. 5,87,136 and the Company had therefore to pay Rs. 60,438 more on this lot.

Besides this rails were very urgently required for the Kalabagh-Bannu Railway which this Company were constructing for His Exalted Highness the Nizam's Government and as Messrs. Tatas had refused to supply material for this purpose this also had to be obtained from England. The quantity so obtained was 9,269 tons at a cost of Rs. 15,93,831. The price at contract rates would have been only Rs. 12,97,142. Here again the Company had to pay Rs. 2,96,689 more.

11,500 tons of rails are now required for the completion of the Kalabagh Bannu Railway and an order for this quantity has been placed with the Tata Iron and Steel Company at a rate of Rs. 105 per ton.

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(7) *Letter from the Secretary, Tariff Board, to Bombay, Baroda and Central India Railway Company, Limited, Madras and Southern Mahratta Railway Company, Limited, Assam Bengal Railway Company, Limited, H. E. H. the Nizam's Guaranteed State Railway Company, Limited, Bengal and North-Western Railway Company, Limited, and the Burma Railway Company, Limited, dated the 22nd July 1926.*

I am directed to refer to the Tariff Board's letter No. 338—343, dated the 7th June 1926, and to say that no new facts concerning the use of Messrs. Tata's rails by your railway came to light during the oral examination of the Tata Iron and Steel Company, Limited, and that in consequence the Board does not now consider it necessary to forward to you extracts from the evidence recorded in this examination.

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(8) *Letter from the Secretary, Tariff Board, to the Agents, Palmer Railways, dated the 31st July 1926.*

I am directed to refer to the Tariff Board's letter No. 338—343, dated the 7th June 1926, dealing with allegations made by the Tata Iron and Steel Company, against the Palmer Group of Railways, in which it was stated that,

after hearing the oral evidence of the representatives of the Tata Iron and Steel Company, in this connection, it might be desirable for the Board to examine the Agents of some of the Palmer Railways on this question. I am to say that the Board have now decided that it is not necessary to request any of the Agents of the Palmer Railways to appear for examination.

I am also directed to invite your attention to page 4 of the note entitled "Rail orders from the Palmer Group of Railways" contained in the Representation submitted to the Indian Tariff Board by the Tata Iron and Steel Company, Limited, in May last, on which that Company stated that it had been informed "that the latest specification issued by the Consulting Engineers, Messrs. Rendel, Palmer and Tritton, definitely states that rails made by the Basic Bessemer Process will not be considered" and where that Company alleged that the object of this was to exclude rails of the Indian Manufacture. I am to say that this allegation was enquired into by the Tariff Board when examining the Company's representative on the 24th June 1926, with the result that the Company agreed that the question should be dropped.

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(9) *Letter from the Burma Railways Company, Limited, dated the 23rd August 1926.*

With reference to the correspondence ending with your letter No. 588, dated the 31st July 1926, I forward for the information of the Tariff Board a copy of my Board's letter No. 716, dated the 29th July 1926.

BURMA RAILWAYS COMPANY, LIMITED.

Extract from the Board's General letter to the Agent.

Para. No. 1 of B. L. No. 716, dated the 29th July 1926. (Received in Rangoon on the 18th August 1926.)

TATA'S RAILS.

Reference: Para. 11 of A. L. No. 1457 of 21st June 1926.

The Board have received the Tariff Board's letter of 7th June 1926, to your address, and have read the parts of Messrs. Tata's statement therein referred to. The facts concerning the contract complained against by Messrs. Tata are as follows:—

(*ii*) In October last year, owing to Messrs. Tata's inability to supply all our requirements for 1925-26, the Board placed orders for rails in England and Germany, at rates that worked out so considerably lower than that of Rs. 115 per ton f.o.r. Tatanagar, offered by Messrs. Tata through the Railway Board for our 1926-27 requirements, that the Board were unable to accept the latter.

(*iii*) Subsequently the Board received from you, under cover of your No. 1431 of the 7th December 1925, a copy of a note by the Railway Board in which it was suggested that as Messrs. Tata's capacity would fall short of the total requirements of Indian Railways in 1926-27 and 1927-28 by about 21,000 and 36,000 tons respectively the Burma Railways should drop out for these two years' supply.

(*iv*) Subsequently, however, the price of British and Continental rails fell so considerably that there was a possibility of some of the Railways indicated by the Railway Board obtaining their rails from other sources than Tata's, in which case the capacity of the latter might be equal to supplying the Burma Railways' immediate requirements. In the altered circumstances the Directors thought it advisable not to exclude Tata's, as had been recommended

by the Railway Board, and consequently as a first step towards inviting tenders by public advertisement, Tata's representative in London was interviewed and with him a date was fixed for opening the tenders which he was satisfied would allow ample time for obtaining a tender for India.

(*v*) It will thus be seen that the Board made special efforts to ensure Messrs. Tata being able to tender (as they did) simultaneously with firms in Europe and America.

(*vi*) There is no foundation whatever for their statement that their quotations were used in order to obtain lower prices from English makers. English and Continental prices had fallen before Tata's rate was reduced from Rs. 115 to Rs. 105.

(*vii*) As regards the price quoted, the accepted tender per ton was:—

		Rs.	A.	P.
£6-5-5 f.o.b.; this at 1*s.* 5 $\frac{29}{32}$*d.* to the rupee .	=	84	0	8
Sea freight and shippers' commission, 17*s.* .	=	11	6	3
Insurance		0	2	2
Indian Customs duty		14	0	0
Total cost, c.i.f. Rangoon		109	9	1
Messrs. Tata's tender per ton f.o.r. Tatanagar was		100	0	0
Rail, sea freight and shipping charges . .		24	0	0
Total c.i.f. price Rangoon		124	0	0

As the contract was for 16,000 tons of rails, Messrs. Tata's price would have exceeded that of the accepted tender by Rs. 2,31,000.

(*viii*) It is not understood how Messrs. Tata arrived at the charges from Tatanagar to Rangoon at Rs. 16 per ton, but even were this correct their rails would have cost Rs. 1,02,917 more in Rangoon than those contracted for.

XXVI.—Correspondence regarding the purchase of bridge work by Railways.

(1) *Letter No. 574, dated the 29th July 1926, from the Secretary, Tariff Board, to the Secretary, Railway Board.*

It has been represented to the Tariff Board that according to the table published on page 53 of Volume I of the Report on the Administration for Railways for the year 1924-25, out of a total expenditure of Rs. 46 lakhs on bridge work only Rs. 5 lakhs were spent in India and the inference has been drawn that local firms have not been sufficiently supported.

2. The Tariff Board realizes that orders for material imported in 1924-25, were probably placed in the previous year, before the Steel Protection Act had been introduced; it would, however, be of great assistance to the Board for the purpose of estimating the effectiveness of the protection on fabricated steel if information could be supplied for the years 1923-24, 1924-25 and 1925-26 as to—

(1) The amount of imported Bridge Work.

(2) The amount of such material fabricated in the Railway Workshops.

(3) The amount of Bridge Work manufactured by Engineering firms in India and purchased by the Railway Companies.

I am to request that, if there is no objection, information on these points may be supplied.

3. It is understood that of the bridge work ordered by the Railways a proportion cannot be manufactured in this country and must be imported. I am to request that if the figures are readily available, the Board may be informed of the proportion of such work in the same years.

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(2) *Letter from the Assam Bengal Railway Company, Limited, dated 28th August 1926.*

With reference to your letter No. 574, dated the 29th July 1926, to the Secretary, Railway Board, Simla, of which a copy has been endorsed to me by him, I have the honour to attach herewith a statement covering the years 1923-24, 1924-25 and 1925-26 and showing—

(1) The amount of imported bridgework.

(2) The amount of such materials fabricated in the A. B. Railway workshops.

(3) The amount of bridgework manufactured by Engineering firms in India and purchased by the Railway Company.

With reference to para. 3 of your letter I have to say that only one span of 150 feet girders was obtained from the United Kingdom during the three years in question.

Statement showing the amount of bridgework obtained from different sources during the years 1923-24, 1924-25 and 1925-26.

Description.	1923-24.			1924-25.			1925-26.		
	The amount of bridge-work imported from the United Kingdom.	The amount of bridge material in railway work-shops.	The amount of bridge-work manu-factured by engineering firms in India and purchased by Railway Company.	The amount of bridge-work imported from the United Kingdom.	The amount of bridge material fabricated in railway workshops.	The amount of bridge-work manu-factured by engineering firms in India and purchased by the Railway Company.	The amount of bridge-work imported from the United Kingdom.	The amount of bridge material fabricated in railway work-shops.	The amount of bridge-work manu-factured by engineering firms in India and purchased by Railway Company.
Girders and trough plates for the S. K. Railway.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Trough plate, 3 ft., No. 6	...	...	...	...	...	3·25	...	...	...
,, 6 ft. ,, 15	...	...	...	...	...	13·05	...	...	...
Girder, 20 ft., No. 26	...	...	...	...	...	67·08	...	...	...
,, 150 ft. span, No. 1	...	...	...	118	...	...	...	...	...
Well curb, No. 2	...	...	...	...	...	12·25	...	...	...
Bond rods and plates	...	...	...	...	...	3·80	...	...	...
Trough plate, 6 ft., No. 3 (for open line).	...	...	...	...	...	3·27	...	...	...
Trough plate, 8 ft., No. 3 (for open line).	...	...	...	...	...	...	...	...	4·80
Girders and trough plates for the F. B. J. Railway.									
Girder, 12 ft., No. 13	...	...	...	...	...	...	...	...	17·16
,, 20 ft. ,, 25	...	...	...	...	...	...	...	...	64·50
,, 30 ft. ,, 2	...	...	...	...	...	...	...	...	12·00
,, 40 ft. ,, 1	...	...	...	...	...	...	...	...	9·60
Trough plate, 3 ft., No. 3	...	...	...	...	...	...	...	...	1·85
,, ,, 6 ft. ,, 12	...	...	...	...	...	...	...	...	13·08
Total	...	...	...	118	...	102·70	...	...	122·99

(3) *Letter from the Bengal and North-Western Railway Company, Limited, dated the 19th August 1926.*

In compliance with Railway Board's letter No. 3494-S., dated 7th August 1926, I beg to give below the information desired in your letter No. 574, dated 29th ultimo:—

Imported Bridge-work.

Year.	Cost in England. £
1923-24	2,379
1924-25	...
1925-26	16,371

Bridge-work fabricated in Railway Workshops.

Nil.

Bridge-work manufactured by Engineering Firms in India and purchased by Bengal and North-Western Railway.

Year.	Amount. Rs.
1923-24	11,075
1924-25	10,460
1925-26	1,48,162

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(4) *Letter from the Bombay, Baroda and Central India Railway, dated the 18th September 1926.*

I beg to give below the information as required by the Tariff Board in paragraph 2 of their letter No. 574 of 29th July 1926, addressed to the Secretary, Railway Board, regarding Bridgework, a copy of which was received under Secretary, Railway Board's endorsement No. 3494-S., dated 7th August 1926.

	1923-24.		1924-25.		1925-26.	
	Tons.	Value. £	Tons.	Value. £	Tons.	Value. £
I.—Imported Bridge-work (through Home Board)	13,994	2,30,129 or Rs. 37,29,905	3,879	54,042 or Rs. 8,99,440	883	13,615 f.o.b. cost or Rs. 2,30,745 f.o.r. Docks Bombay.
II.—Material fabricated in railway workshops		*Nil.*		*Nil.*		*Nil.*
III.—Bridge work manufactured in India	82	Rs. 36,676	589	Rs. 1,21,043	523	Rs. 1,35,633

The figures for 1923-24 under Item I, chiefly consisted of C. I. piles, screws and steel girders imported for the Bassein Bridges.

Re Item II.—Only a few hooks, bolts, etc., are made in workshops; their quantity and value being small, has not been shown above.

Re Item III.—These were all purchased from firms in India.

(5) *Letter from the Eastern Bengal Railway, dated 24th September 1926.*

In reply to your letter No. 574, dated the 29th July 1926, to the address of the Secretary, Railway Board, Simla, of which a copy has been forwarded to me for reply direct to you, I beg to append below the information required for the years 1923-24, 1924-25 and 1925-26.

——	1923-24.	1924-25.	1925-26.
	Rs.	Rs.	Rs.
1. Amount of Imported bridgework .	82,427	...	..
2. Amount of such material fabricated in the railway workshop . .	99,000	77,550	49,200
3. Amount of bridgework manufactured by engineering firms in India and purchased by Eastern Bengal Railway	1,02,986	14,686	1,05,724

The amount, *viz.*, Rs. 82,427 for the year 1923-24, under item 1 represents the value of 3 spans of 100 feet triangulated girder bridges indented for from England in January 1922 and supplied in November 1923. Local firms were not at that time capable of undertaking a work of this magnitude.

The amounts shown in column 2 exclude the value of old girders or other material utilised.

From the figures for 1925-26 under item 3 it is clear that this Railway has accorded substantial support to local manufactures.

(6) *Letter from the East Indian Railway, dated the 3rd September 1926.*

With reference to your letter No. 574, dated 29th July 1926, to the address of the Railway Board, I beg to append below particulars of bridge work imported and manufactured in India during 1923-24, 1924-25 and 1925-26:—

	Value of Imported bridgework.	Value of bridgework manufactured in India.			Total of columns 1 and 4.
		Imported material.	Indigenous material.	Total.	
	1	2	3	4	5
	Rs.	Rs.	Rs.	Rs.	Rs.
1923-24 . .	14,58,034	3,00,160	8,930	3,09,090	17,67,174
1924-25 . .	8,76,260	14,568	20,603	35,171	9,11,431
1925-26 . .	16,17,554	5,16,928	2,108	5,19,036	21,36,590

The amount of bridge materials manufactured in Railway Workshops is negligible.

Our present practice is to have all bridgework which is within the capacity of Indian firms, manufactured in India.

The above figures for 1925-26 are for the combined E. I. and O. & R. sections. Figures for the O. & R. for years 1923-24 and 1924-25 are not available.

(7) *Letter from the Great Indian Peninsula Railway, dated 30th September 1926.*

Purchase of bridge-work.

With reference to your letter No. 574, dated 29th July 1926, to the address of the Secretary, Railway Board, I give below the particulars of bridge-work imported or purchased in India or fabricated in railway workshops during the years 1923-24, 1924-25 and 1925-26:—

.... ..	Amount.	Remarks.
	Rs.	
(1) The amount of imported bridge-work—		
1923-24	95,000	.....
1924-25	41,790	.....
1925-26	3,36,889	.. ...
(2) The amount of bridge-work fabricated in railway workshops—		This work consisted chiefly of foot over-bridges which were made up from old girders removed from the line on account of obsolescence, practically no new bridge-work was fabricated in railway workshops.
1923-24	1,26,532	
1924-25	59,947	
1925-26	1,01,872	
(3) The amount of bridge-work manufactured by engineering firms in India and purchased by the railway.	*Nil*	

2. The reason why all large bridge-work has been imported is that it was considered that no firms existed in India capable of manufacturing the bridge-work detailed under (1) at economical rates. We have recently, however, as a new departure, let a contract with Messrs. Braithwaite and Company for the reconstruction of the Anjan and Sher bridges, and the steel work will be manufactured or fabricated in India. We shall shortly be re-building the Nerbudda bridge and simultaneous tenders will be called in India and in Europe.

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(8) *Letter from His Exalted Highness the Nizam's Guaranteed State Railways Company, Limited, No. 20316, dated the 14th September 1926.*

Importation of material for bridge work from foreign countries.

With reference to your letter No. 574, dated 29th July 1926, to the Secretary of the Railway Board, I beg to inform you that the amount of bridge work imported for the use of this Railway is as follows:—

1923-24.	1924-25.	1925-26.
Rs.	Rs.	Rs.
2,95,302	13,537	*Nil.*

With regard to the enquiries Nos. 2 and 3, the amount is negligible.

(9) *Letter from the Madras and Southern Mahratta Railway Company, Limited, dated the 2nd September 1926.*

Referring to your letter No. 574, dated the 29th July 1926, to the Secretary, Railway Board, Simla, regarding purchase of girders, I have the honour to reply as follows:—

Para. II.

(1) *Amount of imported bridge work.*

	Total Tons.	Average price per ton.	Total amount.	Remarks.
		£	£ s. d.	
1923-24	1,459	15·7	22,906 6 0	F. O. B.
1924-25	3,194	14·9	47,590 12 0	F. O. B.
1925-26	1,328	13·9	18,459 4 0	F. O. B.

(2) *Amount of such material fabricated in the Railway Workshops.*

1923-24
1924-25 } *Nil.*
1925-26

(3) *Amount of bridge work manufactured by Engineering firms in India and purchased by this Railway.*

	Total Tons.	Average price per ton.	Total amount.	Remarks.
		Rs.	Rs.	
1923-24	10	321	3,210	F. O. R.
1924-25	22	322	7,084	F. O. R.
1925-26	213	300	63,900	F. O. R.

Part III.—Indian work is not so finished but plate girders or small work can be turned out quite efficiently.

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(10) *Letter from the Rohilkund and Kumaon Railway Company, Limited, dated 23rd October 1926.*

With reference to the Railway Board's No. 3494-S., dated the 7th August 1926, forwarding a copy of your letter No. 574, dated 29th July 1926, to their address, I beg to give below the required information:—

Imported bridge work.

Year.	Approximate cost in rupees.
1923-24	15,791
1924-25	*Nil*
1925-26	50,629

Bridge work fabricated in Railway workshops.

Nil.

Bridge work manufactured by English firms in Inia and purchased by Rohilkund and Kumaon Railway.

1923-24	*Nil*
1924-25	2,716
1925-26	2,694

(11) *Letter from the South Indian Railway Company, Limited, dated the 21st September 1926.*

With reference to your letter No. 574 of 29th July 1926, to the Secretary, Railway Board, I give below the information asked for in paragraphs 2 and 3 of your letter under reference:—

Para. 2.

	1923-24.	1924-25.	1925-26.
	Rs.	Rs.	Rs.
(1) Amount of imported bridgework .	1,69,607	*2,03,948	4,61,199
(2) Amount of such material fabricated in the Railway Workshops . .	537	4 0 1	5,525
(3) Amount of bridgework manufactured by engineering firms in India and purchased by this Railway .	2,469	..	18,81

* All ordered on new designs prepared in England Time for preparing tenders increased from one to two months to enable Indian manufacturers to submit tenders in England.

Para. 3.

	1923-24.	1924-25.	1925-26.
	Per cent.	Per cent.	Per cent.
(1) Percentage of imported bridgework .	98·56	100	96·08
(2) Percentage of bridgework manufactured by the engineering firms in India and purchased by this Railway	1·44	...	3·92

It is anticipated that when the figures for 1926-27 are available a material increase in the quantity manufactured in India will be shown.

XXVII.—Correspondence with the Madras and Southern Mahratta Railway Company regarding an order placed in Great Britain for forty-eight 60 feet bridge spans.

(1) *Letter No. 714, dated the 2nd September 1926, from the Secretary, Tariff Board, Calcutta, to the Agent, Madras and Southern Mahratta Railway Company, Madras.*

The Tariff Board is informed that, early in 1926, an order has been placed by your Railway with Messrs. Furness Shipbuilding Company in Great Britain for forty-eight 60′ bridge spans. I am to say that it would be of the greatest assistance to the Board in the present Steel Enquiry if you could kindly furnish a statement giving the details shown below relating to this order:—

1. The f.o.b. price per ton British port.
2. The f.o.r. price per ton port of entry, India.
3. The details as to freight, insurance, customs duty and landing charges per ton.

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(2) *Letter from the Madras and Southern Mahratta Railway Company, Limited, dated 10th September 1926.*

Referring to your letter No. 714, dated the 2nd September 1926, I have the honour to give below the information in respect of 48 sixty feet bridge spans obtained from Messrs. Furness Shipbuilding Company in Great Britain:—

1. The f.o.b. price per ton British port—Middlesborough	£13-8-0.
2. The f.o.r. price per ton, port of entry, India—Marmagao Harbour	Rs. 266-4-0*
3. The details as to freight, etc., per ton:—	
Freight per ton	£2-3-2
Insurance and other charges per ton . . .	£0-1-0
Customs duty per ton	Rs. 53-9-0
Landing charges per ton	Rs. 3-8-0

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* This includes customs duty leviable at Castle Rock.

XXVIII.—Correspondence with the North Western Railway regarding an order for 53 spans of 90′ 6″ placed in England.

(1) *Letter No. 713,, dated the 2nd September 1926, from the Secretary, Tariff Board, to the Agent, North Western Railway, Lahore.*

In your letter No. 54-W.-5, dated the 4th February 1926, addressed to the Managing Agents, Burn and Company, Limited, Howrah, copy of which is attached for ready reference, you give the rate at which an English tender for 53 girders was accepted as £16-8-6 per ton. I am directed to say in this connection that the Tariff Board would be greatly obliged if you could kindly supply it with a statement giving the details as below relating to this purchase:—

1. Was the order placed through the Director General, India Store Department, London, on the 9th December, 1925?.
2. The f.o.b. price per ton British port.
3. The f.o.r. price per ton Bombay.
4. The details as to freight, insurance, customs duty and landing charges per ton.

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(2) *Letter No. 54-W.-5, dated the 29th September 1926, from the Agent, North Western Railway, to the Secretary, Tariff Board.*

GIRDERS FOR JHELUM BRIDGE.

With reference to your letter No. 713, dated the 2nd September 1926, regarding the above, I beg to reply the points raised therein as under:—

I. Order for 53 spans placed in England through the Director General of Stores on 1st December 1925.

II. (A) Price was £16-8-6 per ton } C. I. F.
(B) Troughing £14-9-0 per ton } Karachi.

III. Not known in this office.

IV. A copy of the statement showing detail as to freight, insurance, customs duty and landing charges, etc., levied in connection with comparing of prices is attached.

The charges were calculated as per rule 8 of the revised rules for the supply of articles for public service.

List showing f.o.r. Karachi rate per ton for girders and troughings calculated at the prices intimated by the British firms.

Particulars.	1ST TENDER.		2ND TENDER.		3RD TENDER.	
	Girders.	Troughing.	Girders.	Troughing.	Girders.	Troughing.
Rate per ton c.i.f. Karachi in sterling as quoted by British firms.	£ s. d. 16 15 0	£ s. d. 16 1 0	£ s. d. 16 8 6	£ s. d. 14 9 0	£ s. d. 18 4 6	£ s. d. 17 5 0
Rate per ton c.i.f. Karachi in rupees at the current exchange rate of 1s. 6d. per rupee.	Rs. A. P. 223 5 4	Rs. A. P. 214 0 0	Rs. A. P. 219 0 0	Rs. A. P. 192 10 3	Rs. A. P. 243 0 0	Rs. A. P. 230 0 0
* Port Trust charges including loading and wharfage charges, etc., at Rs. 2-2-0 per ton.	2 2 0	2 2 0	2 2 0	2 2 0	2 2 0	2 2 0
* *Note.*—Wharfage charges at Rs. 2-2-0 have been taken considering that the weight of each piece of the girder and troughing will not exceed 1¼ ton when supplied, otherwise the charges for the wharfage are as under: —						
For packages up to 1¼ tons	2 2 0 per ton	...	...	...	...	...
For packages over 1¼ tons and not exceeding 4 tons.	4 4 0 „	...	...	...	...	...
For packages over 4 tons and not exceeding 8 tons.	4 14 0 „	...	...	...	...	...
For packages over 8 tons and not exceeding 14 tons.	6 4 0 „	...	...	...	...	...
For packages over 14 tons.	6 14 0 „	...	...	...	...	...
Handling charges per ton	0 10 0	0 10 0	0 10 0	0 10 0	0 10 0	0 10 0
Customs duty at 10 per cent.	22 5 4	21 6 5	21 14 5	19 4 3	24 4 9	23 0 0
Rate per ton f.o.r. Karachi.	Rs. 248 6 8	238 2 5	243 10 5	214 10 11	270 0 9	265 12 0

(3) *Letter No. 795, dated the 6th October 1926, from Secretary, Tariff Board, to the Agent, North Western Railway, Express Road, Lahore.*

I am directed to refer to your letter No. 54-W.-5, dated the 29th September 1926, sent in reply to the Tariff Board's No. 713 of the 2nd September 1926, and to say that the Board experiences some difficulty in understanding the details given therein. In making the enquiry the Board was particularly anxious to ascertain the actual details of the charges incurred for the importation of the girders in so far as they relate to the amounts paid per ton for sea freight, insurance, customs duty and landing charges. The statement attached to your letter No. 54-W.-5, however, gives no figures for the sea freight and insurance charges, and the figure of Rs. 2-2-0 per ton given for Port Trust charges could only apply if it is assumed that no component of the spans weighed more than 1¾ tons. The statement also shows the Customs duty as having been calculated at 10 per cent. *ad valorem;* if the girders were imported in 1926, it would appear that duty must have been levied at the rate of 25 per cent. *ad valorem* and it is not understood why the duty has been taken as 10 per cent.

I am, therefore, to say that the Tariff Board would be greatly obliged if you could kindly supply the detailed figures showing:—

1. the f.o.b. price per ton British port.
2. the actual amounts paid per ton for—
   (*a*) sea freight
   (*b*) insurance
   (*c*) all landing charges
   (*d*) customs duty.

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(4) *Letter No. 54-W.-5, dated 18th November 1926, from the Chief Engineer, North Western Railway, to the Secretary, Tariff Board.*

GIRDERS FOR JHELLUM BRIDGE.

With reference to the correspondence ending with your letter No. 795, dated the 6th October 1926, and subsequent telegraphic reminder dated the 13th instant, I beg to forward herewith copy of a letter No. 1748—4-E.-1, dated the 15th November 1926, together with copy of list A and B received therewith, from the Controller of Stores of this Railway to my address on the subject which fully detail the information required by you.

Letter No. 1748—4-E.-1, dated 15th November 1926, from the Controller of Stores, North Western Railway, Moghalpura, to the Agent, North Western Railway, Lahore.

GIRDERS AND TROUGHINGS DEMANDED ON ENGLISH INDENT NO. 55 OF 1925.

With reference to your endorsement No. 54-W.-5 of the 6th instant, I beg to refer you to my endorsement No. 1938-4E.-1 of 2nd November 1925 to the address of the Chief Engineers and to state that the information provided for in the lists which accompanied my endorsement was exactly in accordance with what was required by the Chief Engineer in his No. 69-S.—20, dated the 28th October 1925.

No separate charges regarding sea freight, insurance, interest and brokerage were necessary to be shown in the list as the rates quoted by the India Office were c.i.f. Karachi which included all these charges.

Further I would add that wharfage charges for the Girders were calculated at the rate of Rs. 2-2-0 per ton as this office was not in a position to know the actual weight of each Girder shipped in each package.

The Customs duty was charges at 10 per cent. *ad valorem* according to item 101 of the Tariff Valuation Schedule II for 7 months from June to December 1925 which reads as follows:—

Railway materials for permanent way and rolling stock, etc.

"Railway" means a line of railway subject to the provisions of the Indian Railway Act, 1890 and includes a railway constructed in a State in India—10 per cent. *ad valorem*.

On going through the copies of contracts received from the Director General, Indian Store Department, London, I now find that the rates actually charged in the contracts are as under:—

	£	s.	d.		
(1) For girders . . .	15	3	6	per ton	f.o.b. London.
(2) ,, troughing . .	12	14	0	,, ,,	

which work out to

	£	s.	d.		
(1) Girders . . .	17	2	9½	per ton	c.i.f.
(2) Troughing . . .	14	12	9	,, ,,	Karachi.

and not (1) Girders £16-8-0 per ton and (2) Troughing £14-9-0 per ton c.i.f. Karachi as shown by the Director General in the quotations received from him in the first instance.

Moreover the shipping documents received from Home show that out of the 573 tons of Girders so far received, consignments of 182 tons in all were packed in packages each weighing more than 1¾ tons but not over 4 tons. Hence at this rate the total weight of heavy girders over 1¾ tons in the whole lot of 1,290 tons actually indented for will come to about 410 tons and of those 1¾ tons and under to 880 tons. The average rate of the wharfage charges therefore will come to Rs. 2-13-0 per ton as detailed below:—

Tons 410 × £4-4-0 = Rs. 1,742-8-4-0 + Tons 880 × Rs. 2-2-0 = Rs. 1,870-0-0.

Rs. 1,742-8-0 ÷ Rs. 1,870-0-0 = Rs. 3,612-8-0 ÷ 1,290 tons = Rs. 2-12-10½ or say, Rs. 2-13-0 per ton.

Since the position has now altogether changed, I attach herewith 2 revised lists marked A & B detailing all the charges and Customs duty calculated at 25 per cent. as now advised by the Tariff Board and would request that you will please advise the Secretary, Tariff Board, Calcutta, accordingly.

LIST "A."

List showing cost per ton of Girder and Troughing f.o.r. Indian Port calculated at the c.i.f. Karachi rate intimated by the India Office in 1925.

Item No.	Particulars.	Girders.	Troughing.
		£ s. d.	£ s. d.
1	Rate per ton f.o.b. British Port . . .	14 9 3¾	12 10 3
2	Sea freight per ton	1 15 0	1 15 0
	TOTAL .	16 4 3¾	14 5 3
3	Freight brokerage at 6*d.* per ton . . .	0 0 6	0 0 6
4	Insurance at 4*s.* per £100 on items 1 and 2 .	0 0 8	0 0 7
5	Interest at 18*s.* 4*d.* per £100 on items 1 to 4 .	0 3 0½	0 2 8
		16 8 6	14 9 0
		or say at the exchange rate of 1*s.* 6*d.* per rupee.	
		Rs. A. P.	Rs. A. P.
...	Sterling rate per ton c.i.f. Indian Port . .	219 0 0	192 10 8
6	Landing, wharfage and other Port charges at		
	Rs. 2-2 per ton	...	2 2 0
	Rs. 2-13 „	2 13 0	...
	TOTAL . .	221 13 0	194 12 8
7	Customs duty at 25 per cent. on items 1 to 6 .	55 7 3	48 11 2
8	Cost per ton f.o.r. Indian Port	277 4 3	243 7 10

LIST "B."

List showing cost per ton of Girders and Troughings f.o.r. Indian Port calculated at the f.o.b. British Port rate as per contracts let by the India Office on 9th December 1925.

Item No.	Particulars.	Girders.	Troughing.
		£ s. d.	£ s. d.
1	Rate per ton f.o.b. British Port . . .	15 3 6	12 14 0
2	Sea freight per ton	1 15 0	1 15 0
	TOTAL .	16 18 6	14 9 0
3	Freight brokerage at 6*d.* per ton . . .	0 0 6	0 0 6
4	Insurance at 4*s.* per £100 on 1 and 2 .	0 0 8	0 0 7
5	Interest at 18*s.* 4*d.* per £100 on items 1 to 4 .	0 3 1½	0 2 8
		17 2 9½	14 12 9
		or say at the exchange rate of 1*s.* 6*d.* per rupee.	
		Rs. A. P.	Rs. A. P.
...	Sterling rate per ton c.i.f. Indian Port .	228 8 3	195 2 8
6	Landing, wharfage and other Port charges at		
	Rs. 2-2 per ton	...	2 2 0
	Rs. 2-13 per ton	2 13 0	...
	TOTAL .	231 5 3	197 4 8
7	Customs duty at 25 per cent. on items 1 to 6 .	57 13 4	49 5 2
8	Cost per ton f.o.r. Indian Port	289 2 7	246 9 10

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